



***Integrating Pharmacists within Aboriginal
Community Controlled Health Services to improve
Chronic Disease Management (IPAC) Project***

QUALITATIVE EVALUATION REPORT

**REPORT TO THE
PHARMACEUTICAL SOCIETY OF AUSTRALIA**

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Integrating Pharmacists within Aboriginal Community Controlled Health Services (ACCHSs) to improve Chronic Disease Management (IPAC) Project.

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Australian Aboriginal peoples and Torres Strait Islander peoples. We acknowledge that these two groups of people have separate cultural identities. We acknowledge the diversity of experience of Australian Aboriginal peoples and Torres Strait Islander peoples across the country. We use the separate terms Australian Aboriginal peoples or Torres Strait Islander peoples when discussing these individual groups.

Abbreviations

ACCHS:	Aboriginal Community Controlled Health Service
Affiliate:	NACCHOs State and Territory representative agencies
AHS:	Aboriginal Health Service
AHW / AHP:	Aboriginal Health Workers / Aboriginal Health Practitioners
AMH:	Australian Medicines Handbook
AMS:	Aboriginal Medical Service
APF	Australian Pharmaceutical Formulary
CIS:	Clinical information system
CPS:	Clinical pharmacist services
CQI:	Continuing Quality Improvement
CTG:	Closing the gap
DAA:	Dose administration aids
DNA:	Did not attend
eTG	electronic Therapeutic Guidelines
FG:	Focus group
FTE:	Full time equivalent
GP:	General Practitioner
GPMP:	General practice management plan
HbA1c	Haemoglobin A1c
HCH:	Health Care Homes
Health service:	ACCHS service
HMR:	Home Medicines Review
IPAC:	Integrating Pharmacists within Aboriginal Community Controlled Health Services to improve Chronic Disease Management
ITC:	Integrated Team Care
MIMs	Monthly Index of Medical Specialities
N-MARS:	NACCHO Medication Adherence Readiness Scale (patient survey)
NACCHO:	National Aboriginal Community Controlled Health Organisation
NT:	Northern Territory
QLD:	Queensland
QH:	Queensland Health
QUMAX:	Quality Use of Medicines Maximised for Aboriginal and Torres Strait Islander People
PenCAT:	Pen Clinical Audit Tool
PHC:	Primary health care
PPIs:	Proton pump inhibitors
PRG:	Project Reference Group
PSA:	Pharmaceutical Society of Australia
RMMR:	Residential Medication Management Reviews
Section 100:	Section 100 Remote Area Aboriginal Health Services (RAAHS) Program

Background and Aims

The *Integrating Pharmacists within Aboriginal Community Controlled Health Services (ACCHSs) to improve Chronic Disease Management (IPAC)* Project was developed in 2017 to investigate whether including a non-dispensing pharmacist as part of the primary health care (PHC) team within ACCHSs (the intervention), leads to improvements in the quality of the care received by Aboriginal and Torres Strait Islander peoples with chronic diseases. The theory for the project suggests that pharmacists will facilitate increased access to medication-related expertise and assessments, which when coupled with integration into the PHC team and increased engagement with participants, staff and other stakeholders, will result in increased services and quality use of medicines, and improved health outcomes. The project was conducted in a partnership between the Pharmaceutical Society of Australia (PSA), the National Aboriginal Community Controlled Health Organisation (NACCHO), and James Cook University College of Medicine and Dentistry (JCU).

The intervention was designed to be delivered at two levels: 1) patients, and 2) health professionals and systems. Activities targeting patients included the assessment of medication management through medication reviews (including Home Medicines Reviews (HMRs) and non-HMRs), medication adherence and appropriateness, medication-related problems, improving patient medication knowledge and giving preventive health advice. Activities targeting health professionals and systems included conducting education sessions, responding to medication-related queries, reviewing prescribing, mentoring new prescribers, participating in case conferences, undertaking drug utilisation reviews, and liaison with community pharmacy and other stakeholders to ensure continuity of care and transitional care including supporting patients discharged from hospital.

The aim of the qualitative analysis was to evaluate perceptions from health service staff, patients and local community pharmacists on having an IPAC pharmacist integrated within the ACCHS. The analysis also explored perceptions regarding the effectiveness of the intervention through an in-depth assessment of implementation in an urban, regional and remote setting.

Methods

Data to inform the qualitative evaluation was collected between June and August 2019 after IPAC pharmacist placements within ACCHSs for at least six months. Three main strategies were used to collect data for the qualitative evaluation of the project:

1. Semi-structured interviews with IPAC pharmacists;
2. Mixed methods online surveys with general practitioners (GPs), Chief Executive Officers (CEOs), managers, and community pharmacists; and
3. Site-visits comprising focus groups and interviews with health services staff and patients, interviews with the IPAC pharmacists, shadowing and observation.

Proformas for interviews, focus groups and online surveys were developed by the qualitative evaluation team. The proformas were developed using the project protocol and considering issues which emerged throughout the implementation of the IPAC project. They were distributed to key stakeholders for comment. Feedback was taken into consideration and revised versions distributed for further input. Proformas were piloted with relevant members of the project operational team or evaluation team. Recordings and notes from the interviews and focus groups were de-identified, transcribed and thematically analysed.

The NACCHO and PSA Project Coordinators provided the names and email addresses of the recommended recipients for the online surveys. Recommended recipients were generally individuals with whom the coordinators had contact in the development and implementation of the intervention. Community pharmacists were identified by ACCHSs as those with whom they worked with regularly.

All ACCHSs participating in the IPAC project were invited to nominate to be involved in a site visit for the qualitative evaluation. ACCHSs were selected based on their willingness to participate (in line with principles of community based participatory research), geographic location, being a site with good patient recruitment and a high level of pharmacist activity; and sufficient pharmacist FTE. Other selection criteria included geographical dispersion ensuring a service was selected in each setting - urban, regional and remote. The Project Reference Group comprising representatives from all participating ACCHSs, NACCHO Affiliates and NACCHO, endorsed the site recommendations.

Results and Discussion

Twenty-four (24) IPAC pharmacists provided feedback on their experiences in the role and how well the project was able to be implemented within their ACCHS. The IPAC pharmacists represented all health services recruited in the project (n=20).ⁱ Thirteen general practitioners, 12 managers and 10 community pharmacists responded to the online survey. Three ACCHSs were visited for an in-depth assessment of implementation. One service was located in an urban area, another in a regional area, and one in a remote setting. Seven focus groups or group interviews were conducted with 17 service staff and 17 patients / carers. Individual interviews were held with eight (8) health service staff and three (3) patients / carers. Fieldwork included a day observing the work of the IPAC pharmacist (or shadowing) and the service in general at each site, as well as observation of the community context (e.g. a visit to community pharmacies).

Benefits

Patients and health services staff reported numerous benefits of having a pharmacist delivering services within the ACCHS. The majority of patients reported that the IPAC pharmacist had been able to look at their medications and suggest alternative or different combinations of medications, or regimes, that resulted in them *'feeling better'*. IPAC pharmacists took a holistic approach to patient care, listened to patients and better understood their lives. Some patients reported being more involved in decisions about their care with the support they received from the pharmacists. Pharmacists sometimes sat in on consultations with the patient and their GP. Patients felt they were empowered to better manage their health conditions through better understanding their condition, why they needed to take their medications and how they worked. Many patients indicated they were more adherent to their medications. In addition to feeling better, patients also reported other benefits as a result of medication changes such as losing weight, being motivated to do more exercise and engaging with other support groups in the community. The IPAC pharmacist and other health services staff concurred that patients' management of the health conditions (and adherence to medications) had improved, as had their biomedical test results, particularly HbA1cs.

The main benefit for health services staff was having access to an *'in-house medicines expert'*. IPAC pharmacists provided support and advice to health services staff informally such as through *'corridor conversations'* as well as formally through medication management reviews. Both the IPAC pharmacists and GPs reported that recommendations were commonly made by the IPAC pharmacists following medication reviews. Recommendations were perceived to be of high quality and prescriber up-take of the recommendations was reported to be high. Provision of education sessions for health services staff, including GPs, nurses and Aboriginal Health Workers and Practitioners (AHWs / AHPs) were perceived as valuable. Health services staff also benefited from the pharmacists having input into their clinical team meetings and case conferences. The pharmacists contributed to medicines safety and quality assurance activities by conducting drug utilisation reviews and assisting in reviewing ACCHS medication-related policies.

GPs reported having the IPAC pharmacist as part of the PHC team saved them time as medication queries were answered quickly, and they could refer patients to the pharmacist for education about their clinical conditions. The pharmacists could also better explain to the patient how their medications worked. Time was also saved for some GPs as they could make referrals for medication reviews to the IPAC pharmacist. Some IPAC pharmacists had conducted HMRs for the health services as an external provider prior to taking on the IPAC role.

ⁱ IPAC Project quantitative reports are based on patient data from 18 ACCHSs due to the discontinuation of two services in the implementation phase of the project.

The majority of patients, managers, GPs, other health services staff, and IPAC pharmacists recognised benefits received through the project and overwhelmingly supported the integration of pharmacists within ACCHSs.

Interactions with Community Pharmacies

Many ACCHSs already had strong relationships with their local community pharmacies, at the commencement of the project, particularly through the Quality Use of Medicines Maximised for Aboriginal and Torres Strait Islander People (QUMAX) programme, and section 100 arrangements. Relationships between ACCHSs and community pharmacies were further strengthened as a result of the IPAC project.

IPAC pharmacists worked together with community pharmacists to problem solve, access discharge summaries, confirm the patient's medication history, undertake medication reconciliation by correcting errors and medication lists, and facilitate provision of dose administration aids (DAAs) for health service patients. Community pharmacists reported that the IPAC pharmacist role was very helpful and useful to them and it facilitated communication between the community pharmacy and GPs.

Community pharmacists reported benefits from the IPAC project included increased referrals for HMRs and improved participation in HMRs. They also felt that patients were more interested in their medicines. Community pharmacists also perceived that patient knowledge of their medicines and adherence to medicines had improved since the IPAC pharmacists had commenced in the ACCHSs. All community pharmacists who responded to the question (n=7) believed that there was a role for an IPAC-type (non-dispensing) pharmacists within ACCHSs.

Enablers and Challenges

Having a pharmacist with the right '*organizational fit*' and personality was just as important as their skills and experience. As well as possessing relevant clinical skills, pharmacists needed to be culturally responsive, able to develop relationships, build rapport, be flexible, non-judgmental, and resilient. Pharmacists needed to be confident and understand the need to be proactive and engage with people to make the role more effective. These particular personality characteristics were one of five key factors for pharmacists to be effective in the IPAC role. IPAC pharmacists also required good clinical skills, and the ability to communicate, collaborate with internal and external stakeholders and practice in a culturally responsive way.

An enabling factor for effective engagement between IPAC pharmacists and their patients was the pharmacists' ability to access the ACCHSs clinical information system (CIS) and make clinical assessments according to comprehensive patient information. This facilitated access to the patients' medications history, conditions and other information regarding social situations which informed consultations with patients and medication reviews. IPAC pharmacists could also add notes on their recommendations and interactions with the patient into the CIS. This helped their integration into the PHC team. Pharmacist accreditation for HMRs enabled medication reviews to be completed and also allowed the GPs within ACCHSs to receive MBS benefits. Some participants reported health service revenue had increased as a result of the pharmacists' activity. Some issues were experienced with setting up appropriate levels of access to the CIS, and unstable internet connections and no internet access in some remote communities hindered practice.

'*Strategic loitering*' and '*hanging out*' in the waiting room was a strategy that helped some pharmacists to build relationships with patients and staff. Strong relationships between the IPAC pharmacists and the ACCHSs' AHWs / AHPs assisted the pharmacists to develop relationships with patients and fostered acceptance. Good relationships between the pharmacist and the patient resulted in some patients feeling comfortable making appointments to see the pharmacist themselves, and some patients also telephoned the pharmacists with questions. Many IPAC pharmacists reported patients were actively engaging in their consultations.

Through the project a number of challenges were identified to integrating a pharmacist within the PHC team. Prior to the IPAC project there were few pharmacists working in general practices or ACCHSs nationally and there was very little understanding of the role of a clinical pharmacist in the primary care setting. A few ACCHSs in the project had worked closely with pharmacists providing HMRs for patients of their service, and staff had a slightly better understanding of the value a pharmacist could add to patient care. However, service readiness for the project was a challenge for some services. All ACCHSs received support and a site visit as part of the recruitment process, and some services were well prepared for the pharmacist and understood the nature of the role and its potential value. However, staff in other services needed time to fully understand the role and learn how to utilise the pharmacists' expertise. Just under half of the IPAC pharmacists felt their service '*was not ready*' for their role. More discussion with ACCHS staff, education or systems changes may have assisted prepare their service before the pharmacist commenced. Some services needed to develop policies and procedures in order to guide ACCHS medicine-related activity so that the pharmacist could assist with these activities and establish their role within the service. This was burdensome for some ACCHSs. In addition, the need for pharmacist induction into the service, the problem of staff turnover, and other service priorities were also challenges.

The majority of the IPAC pharmacists felt accepted and well-integrated within the PHC team at the time of their interview (after approximately six months of practice in their service). However, at commencement an initial lack of understanding of the IPAC pharmacist role led to some of them being underutilised, and referrals to the pharmacists from other ACCHS health professionals were low. The provision of education to staff, predominantly by the IPAC pharmacist, on how they could contribute to the PHC team and their ability to improve health outcomes for patients, facilitated better understanding of their role, developed relationships and helped the pharmacist to integrate into the team. Over time, these factors contributed to more patients being referred to the pharmacist. Most pharmacists had a project champion who assisted with their integration. Support from GPs and Aboriginal Health Workers and a stable workforce were enablers to the integration of the IPAC pharmacist and referral process. Other support from ACCHSs such as provision of a uniform and consulting room space, as well as assistance with promotion of the pharmacist services were also enabling factors for implementation of the role and the project.

Many of the pharmacists and health services staff reported that the irregular attendance of patients at ACCHSs presented challenges. This often resulted in patients being seen by many health professionals when they did present, in order to deliver opportunistic care. Patients with chronic disease, especially patients with kidney disease also had many appointments with clinical staff and were often overwhelmed. Other issues that presented challenges for the pharmacists to organise follow-up appointments with patients included transience, language barriers and 'sorry business'. Several IPAC pharmacists commented that patients often visited their homelands or family meaning they were not readily available for follow up.

Other project-related challenges were the complexity of the participant consent process and the need for written consent from the patient. This was particularly challenging where patients had low health literacy or where English was not their first language. Another challenge within the project was the time it took for pharmacists to enter research data for the quantitative analysis. This was reported by some pharmacists to be quite time-consuming.

Conclusion

Overall, the qualitative evaluation of the IPAC project demonstrated there was overwhelming support for non-dispensing pharmacist services to be integrated within the PHC team of participating IPAC sites and in ACCHSs more broadly. Health service staff, the IPAC pharmacists and patients benefited from the initiative. Relationships with community pharmacy were further strengthened as they reported the IPAC role had been very helpful and useful. Acknowledging the time required for ACCHSs to develop systems to integrate the pharmacist and educate health professionals on the value of the role is important in future implementation of the model.

Summary of recommendations from qualitative evaluation participants

The following table summarises suggestions from participants in the qualitative evaluation on future policy and implementation of integrated pharmacists in ACCHSs.

Suggested actions for sector development	Owner and key partners	Potential pathways to implementation	Intended industry impacts
1. Support policy to integrate the role of a non-dispensing pharmacist within ACCHSs.	Federal Government	<p>1.1 Participants in the qualitative evaluation suggested options to support ACCHSs implement an ongoing integrated pharmacist model of care:</p> <p>1.1.1. Core services funding be increased to enable ACCHSs to implement the role.</p> <p>1.1.2. In remote settings explore increasing the section 100 pharmacy support allowance to fund integrated pharmacist time onsite within the clinic to deliver patient-related services.</p> <p>1.1.3. Consideration for other Federal Government sources of financial support for an integrated pharmacist within ACCHSs such as the creation of an MBS item for integrated pharmacist patient-related services (time based).</p> <p>1.2 Participants in the qualitative evaluation suggested that the cap on the number of funded HMRs should be removed to enable ACCHSs to facilitate as many HMRs as is needed by their patients. Current HMR Program Rules as defined by the Sixth Community Pharmacy Agreement limits HMRs which can be conducted by an accredited pharmacist to 20 per month.</p>	<p>Implementing this recommendation will lead to:</p> <ul style="list-style-type: none"> Enhance quality of care outcomes for Aboriginal and Torres Strait Islander peoples with chronic disease Continuity of care provided by pharmacists integrated into the team Improved prescribing quality Improved cost effectiveness Improved medication adherence
2. Advocacy and support to ACCHSs to facilitate processes for integrating pharmacists	NACCHO and Affiliates	<p>2.1 NACCHO and Affiliates support the development of processes and resources for pharmacists to be integrated in the primary health care teams of ACCHSs. Processes and resources should support ACCHS staff to be informed on the value of having a pharmacist in the team, to implement change management processes to introduce and embed the pharmacist and develop referral processes.</p> <p>2.2 Resources to guide preparation should consider the IMPACT Framework [1] and assist ACCHSs for the pharmacist role.</p> <p>2.3 ACCHSs that will be most ready to establish an integrated pharmacist role are those with systems established for quality improvement (eg. Referral, CIS).</p> <p>2.4 Develop the capacity of Aboriginal Health Workers/Practitioners and Outreach Workers to facilitate referral for patients needing support from the integrated pharmacist.</p>	<ul style="list-style-type: none"> ACCHSs are prepared for the pharmacist role All staff are aware of value and benefits of the role and facilitate integration into the primary health care team
3. Co-design of the pharmacist role with the ACCHS to ensure it	NACCHO, ACCHSs and PSA	<p>3.1 Policy guiding the implementation of the pharmacist role should allow flexibility for ACCHSs to use the role to best meet the needs of the health service and promote self-determination.</p>	<ul style="list-style-type: none"> Pharmacist services are tailored to the local ACCHS and meets patients' needs

Suggested actions for sector development	Owner and key partners	Potential pathways to implementation	Intended industry impacts
meets their needs		<p>3.2 ACCHSs should be actively involved in the co-design of the integrated pharmacist role to ensure it suits their needs and seek support from NACCHO and their Affiliate where necessary.</p> <p>3.3 The recruitment of pharmacists to be integrated within ACCHSs should be flexible and be led by, ACCHSs so that pharmacists have the 'right organisational fit' and are skilled in key areas (character, clinical skills, communicator, collaborator and culturally responsive).</p> <p>3.4 Future projects to assess outcomes from integrated pharmacists within ACCHSs or alternate new models, need to allow a lead-in time to allow pharmacists to develop relationships with staff and patients and develop a deeper understanding of the local community and health service culture.</p>	
4. Training and support to prepare pharmacists for a non-dispensing, integrated role within ACCHSs	PSA, NACCHO, and ACCHS, pharmacist training providers	<p>4.1 Support pharmacists to develop career pathways for integrated pharmacist roles. [2, 3]</p> <p>4.2 Prepare pharmacists for integrative roles within ACCHSs through the development of a training program that includes the conduct of medication reviews, working with internal and external stakeholders, team-based collaboration, patient counselling, preventive health care, transitional care arrangements, medication adherence assessment of Aboriginal and Torres Strait Islander patients, the provision of education and training and medicines information to staff and patients, and undertaking drug utilisation reviews. The program should also include comprehensive training on clinical information systems including all basic functionality, how to generate quality improvement reports and how to set up patient recalls.</p> <p>4.3 Ensure opportunities for pharmacists to undertake cultural safety training responsive to their place of practice prior to commencing activity within ACCHSs.</p> <p>4.4 ACCHSs to provide pharmacists with induction to the service and the local community including introduction to staff members in key roles and cultural orientation to the local population.</p> <p>4.5 Facilitate a community of practice network to enable knowledge sharing and peer support. Mentors can assist with clinical and/or cultural aspects of integrated practice and development of career pathways.</p>	<ul style="list-style-type: none"> Pharmacists and ACCHS staff are prepared and effectively deliver patient-centred care
5. Facilitate continuous improvement through further research and evaluation	Federal Government, Academic Institutions, NACCHO and affiliates, ACCHSs	<p>5.1 Funding should be made available for further research and evaluation of integrative pharmacist programs to facilitate continuous quality improvement.</p> <p>5.2 Research involving patients receiving services from pharmacists should use simplified information sheets and consent forms for patients and consider</p>	<ul style="list-style-type: none"> Improve evidence base and continuous improvement of role and service delivery

Suggested actions for sector development	Owner and key partners	Potential pathways to implementation	Intended industry impacts
		<p>formal translation into local languages.</p> <p>5.3 Future research projects may consider the use of the pharmacist logbook in order to facilitate data collection about the activity of integrated pharmacists. Some design improvements to simplify data entry, and comprehensive training, are suggested.</p> <p>5.4 In the design of future research projects consider the time required for data entry and ensure this element is adequately factored into the allocation of working hours.</p> <p>5.5 Mechanisms need to be established to support the continuation of trials, beyond the trial period, if they have been found to be successful. Short term projects have detrimental impact on Australian Aboriginal peoples and Torres Strait Islanders who have historically been over-researched, and on ACCHSs work processes.</p>	

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1. Introduction

1.1 Aboriginal and Torres Strait Islander Health and Chronic Disease

Australia has diverse, resourceful and dynamic Aboriginal and Torres Strait Islander communities however, there are significant health disparities compared with other Australians. Aboriginal and Torres Strait Islander Australians live approximately 10 years less than non-Indigenous Australians [4]; and rates of chronic disease including diabetes and kidney disease are significantly higher among Aboriginal and Torres Strait Islander peoples [5, 6]. Many Aboriginal peoples in remote Australian communities have insufficient access to health infrastructure including housing and sanitation [7, 8].

1.2 Medications Adherence

Adherence to a medication regimen is central to good health outcomes. Medication adherence for many people is extremely poor, resulting in disease-related complications, higher levels of hospitalisation, and increased morbidity and mortality [9]. A systematic review found the economic costs of non-adherence are high [10]. Aboriginal and Torres Strait Islander people in remote Australian communities face many barriers accessing medicines including financial and geographic constraints, failed patient-clinician interactions, poor healthcare delivery systems and complex therapeutic medication regimens.[11, 12] The physical settings of community pharmacies, and the lack of adequate integration with Aboriginal health services for tailored information, have made it difficult for some Aboriginal and Torres Strait Islander people to have productive relationships with their community pharmacists.[13-15] While some Australian initiatives under the 6th Community Pharmacy Agreement (6CPA), the Section 100 Remote Area Aboriginal Health Services Program (section 100), and the Closing the Gap (CTG) Pharmaceutical Benefits Scheme (PBS) Co-payment measure, have removed some of the financial barriers to accessing medicines, the 2013-14 PBS per person expenditure for Indigenous Australians was only 33% of the expenditure for non-Indigenous Australians [16]. There is still considerable need for improvement.

1.3 Aboriginal Community Controlled Health Services

In reaction to previous government inaction and culturally inappropriate care, from the 1970s Aboriginal and Torres Strait Islander peoples developed Aboriginal Community Controlled Health Services (ACCHS) to deliver primary health care [17]. In mainstream services many health professionals are inadequately trained to undertake culturally safe care, and are unaware of how upstream determinants of health including employment, housing and racial discrimination can influence patient care or how to support patients with these social needs [5, 18, 19]. “Closing the gap” in health, education and social indicators requires a significant investment of resources across all levels of government and partnerships with Aboriginal and Torres Strait Islander peoples [7]. One strategy is to co-design innovative models of health care with Aboriginal and Torres Strait Islander peoples. Innovative but culturally appropriate models of care to enhance the quality use of medicines for Aboriginal and Torres Strait Islander peoples need to be devised.

1.4 Integrated and Collaborative Pharmacist Models

‘Integrated care’ ensures patients with chronic disease who need care from multiple providers, have a joined-up experience of care, or patient-centred care [20]. This is a health system goal to ensure the centrality of patient's needs around which care is organised, more efficient and cost-effective care.

Rosen, Mountford [21] described processes necessary to deliver integrated care based on four international case studies and Wagner’s ‘chronic disease care model’ to enhance the organisation of care for chronic disease. The six dimensions of integrated processes of care developed by Rosen et al were:

1. Organizational: governance structures within and between institutions and design of organisational structures that aid integration. These include the relationships between organisations that could be formalised through “partnership, structural integration through merger, contractual relationship” (page 27). They also encompass the frameworks that ensure aims and objectives are achieved. Organisations

have a governance group to guide goals and integration initiatives. Goals were clearly communicated to all staff.

2. Informational: clinical information systems that support communication between clinical teams, outcome measurements and performance management. Examples include identifying gaps in care through population registers; patient access to records (to check results of book appointments); and secure messaging to share clinical records between primary and tertiary care. Informational integration was identified as challenging to achieve as not all clinics had access to electronic health records. Furthermore, in some areas there were privacy issues with data sharing.
3. Clinical: Consistent and standardised clinical care along the whole continuum of care. These are underpinned by standard guidelines or shared work practices. Examples of practices include: clinical prompts through population registers; evidence base guidelines used for standardisation of care for common conditions; and multi-professional care coordination for patients with complex problems.
4. Functional or Administrative: These aim to reduce administrative work. Support systems such as strategic planning, joint HR systems, and secondment of staff. Shared administrative functions include contract and claims management; central employment of shared staff; and joint education and training.
5. Financial: joint budgetary arrangements and payment systems. These can vary across organisations and may include micro-incentives (performance-linked payments).
6. Normative: Identifying, communication and operational shared professional standards, vision, goals and values. Professional leaders were key to establishing and sharing these shared standards and visions and values. Shadowing of other professionals and social events also assisting in understanding different roles and building trust between professions. [20, 21]

Pharmacists working within ACCHSs is one way to integrate non-dispensing pharmacist services with the existing primary healthcare team. The National Health Service in the UK have invested heavily in integrating pharmacists into health care teams [22]. New Zealand, Canada and the USA already have pharmacists providing clinical services in general practice settings [23]. In Australia, the concept has received endorsement from leading organisations such as the Pharmaceutical Society of Australia (PSA), Australian Medical Association, the National Aboriginal Community Controlled Health Organisation and pharmacists. [23-27]. However, there are still very few pharmacists practicing in primary health care settings in Australia.

Currently, pharmacists are providing only limited clinical pharmacist services to Aboriginal Australians due to several barriers.[28, 29] These include restrictive Home Medication Review (HMR) business rules including processes that are not always possible nor culturally acceptable [13, 14, 29]. Aboriginal health service GPs provide few HMR referrals for Aboriginal patients. One of the factors inhibiting these referrals is a lack of trust in pharmacists' ability to appropriately manage their patients [14, 30]. Yet, when medication reviews are delivered in culturally appropriate settings there is great potential to increase patients' medication knowledge, medication adherence and chronic disease management [14].

Co-location of pharmacists within general practice has enabled greater communication, collaboration and relationship building among health professionals.[25, 31] Practice pharmacists have been shown to increase uptake of medication review recommendations by doctors [32]. Moreover, the 2010 UK PINCER and PRACTICE studies[33, 34] found that pharmacists play a critical role in reducing medicine errors in general practice. A 2015 report by Deloitte Access Economics (DAE) demonstrated that the integration of pharmacists in Australian general practice has the potential to generate \$1.56 in health system savings for every \$1 invested in the program [35]. The analysis estimated that integration of pharmacists into general practice would cost the Government \$969.5 million over four years, however, this investment is more than offset by the broader health savings at a federal, state and consumer level [35].

Hazen et al (2018) undertook a systematic review that aimed to investigate whether the degree of integration of non-dispensing pharmacists into the health care team may be a determinant for its success.[36] This association had never been properly assessed. The authors define the 'degree of integration' according to the six dimensions of integrated processes of care outlined by Walshe and Smith (from Rosen et al). The review found 60 studies had 89 health outcomes from which the researchers could count how many outcomes were positive and how many were not positive. For all outcomes (surrogate and proxy) most studies showed that integrated pharmacists improved these outcomes (62% of outcomes from these studies were positive; 67% surrogate outcomes, and 72% proxy outcomes were positive). Surrogate health outcomes were clinical, or patient reported health outcomes. Proxy health outcomes were defined as improvement in medication errors.

Hazen et al found there was no relationship between the degree of integration and the proportion of positive outcomes [36]. Low integration and high integration levels showed the same proportion of studies with positive outcomes. Fully integrated clinical pharmacist services (CPS) had about 62% positive outcomes which was the same as low integrated CPSs. However, the study also explored the type of CPS (whether disease-specific or patient-specific).[36] *Disease-specific CPSs* targeted patients by their disease e.g. predominately protocol driven services specifically to patients with diabetes. Forty-nine percent (49%) of *disease specific CPSs* were fully integrated, and these had a lower percentage of positive health outcomes than those service that were less integrated (59% compared with 72%). In contrast, *patient-specific CPSs* targeted a more heterogeneous range of patients such as those with co-morbidity or risks like polypharmacy. This model of fully-integrated *patient-specific CPSs* resulted in more positive outcomes from these studies (70%) compared with 57% for partially integrated CPSs and 55% for non-integrated services.

The six dimensions of integrated care are 'processes' to achieve integration. There is no evidence to show that the more of these processes that exist, the more effective the integration and the more effective the outcomes.[20, 21] Protocol-driven services may not be dependent on systems that optimise the integration between services, which may be why Hazen et al (2018) found that the association between outcomes and the degree of integration with regard to clinical pharmacist services that were *disease-specific* (ie protocol driven) was weak.[36] In contrast, there was an association between the degree of integration and the proportion of studies that showed benefit for *patient-specific* pharmacist services (for patients with co-morbidity). This finding is consistent with the large body of evidence supporting key processes of care within health services and the role of collaborations to optimise the management of patients with chronic disease as in the 'chronic disease care model' [37, 38].

The McDonough and Doucette (2001) Model for *Collaborative Working Relationships (CWR)* between general practitioners (GPs) and pharmacists explains that if patient care is to be improved, then the activities of GPs and pharmacists needs to be better coordinated [39]. To this end, they developed a 5-stage model to measure the degree of collaboration between GPs and pharmacists. Based on organisational theory, the model describes how such a collaborative relationship progresses from Stage 0 where the exchange between GPs and pharmacists is discrete, at a distance, and of short duration (such as pharmacists alerting GPs of a dispensing issue by phone), to Stage 4 where there is a formalised collaborative working agreement between the pharmacist and the GP. Stage 0 describes the degree of collaboration that for many GPs is observed as usual care. Stage 4 has progressed collaboration to the point where many of the integrative processes by Rosen and Moutford are fulfilled, and there is an interdependence between GP and pharmacist.

1.5 Enablers and barriers of integrated pharmacist models

At a pragmatic level, the literature outlines the enablers and barriers of integrated pharmacist services models into primary health care. A literature review on the enablers and barriers of integrated pharmacist services models into primary health care was conducted (see Appendix A).

Enablers for pharmacists working effectively in primary health care

Orientation of both health service staff and pharmacist to fully understand the role and competencies of the pharmacy profession was an important enabler. Preconceived ideas of health services staff about the role

and capabilities of pharmacists in primary care should be addressed [40]. Recognition of the value of skills and specialist knowledge of the pharmacist [41, 42] and enhanced training on how to work together [43] were also required. Prior to the pharmacist joining the primary health care team, their role and how they will work in the team should be clearly defined. Furthermore the pharmacist should continue to educate team members about their role [44, 45]. Promotion of the role to both health professionals as well as patients should also continue once the pharmacist has commenced [24, 44].

Professional trust and respect between pharmacists and other health providers was recognised as a facilitator of integration in several studies. In a study of pharmacist recommendations for changes to medications, Benson et al (2018) found that pharmacists who had already established relationships with General Practitioners (GPs) had a higher acceptance rate of recommendations. Benson et al (2018) and Barry and Pammett (2016) also noted need to demonstrate value and build relationships [40, 46, 47].

Benson et al (2018) highlighted that if doctors recommended and introduced the pharmacist to patients; patients were less resistant to recommendations. Benson, Sabater-Hernández [46] outlined that trust was needed to enhance existing relationships and build new relationships [41, 48].

There was a need to ensure a supportive environment including “strategic positioning” in the clinic [40] as co-location facilitated integration of pharmacists into primary health care teams [41, 44, 49, 50]. Pharmacists’ should ideally have consulting space within the primary health care clinic. Access to a patient’s medical file was useful for pharmacists conducting medication reviews [32, 50-52]. Other strategies for successful integration and to remain highly visible were to have a dedicated workspace, attend meetings and social events as well as practice “strategic loitering” such as standing in corridors and waiting rooms [48].

Increased face to face communication [46] facilitated by co-location [41], were key to pharmacists building rapport with staff and patients. This communication included informal and formal opportunities to communicate [32] and regular meetings and debriefs [42]. The importance of face-to-face communication was highlighted by Tan et al (2014b) who found there were more positive outcomes when pharmacists delivered the results of medication reviews face to face to the GP [49]. Using case conferencing to discuss medication reviews was also found to be most beneficial by Kwint et al [52].

For pharmacists to be effective in integrated primary care settings they need to be experienced, have good clinical skills and be highly motivated [45, 53]. For best practice pharmacists also need to have ongoing training [24] and personality traits which include motivation, assertiveness and confidence [42, 48].

Other enablers to effective practice included the willingness of health professionals to collaborate [46] and share records [41]. Flexibility in funding arrangements and variations in models of practice enables the pharmacist to adapt to the needs of patients and the practice [54-56]. Mentorship and appropriate supervision of practice-based pharmacists were also cited as keys to success [42, 45, 48, 57].

The Integrating Models of Pharmacists Across Care Teams (IMPACT) Framework identifies six domains to guide PHC services in readiness for the integration of pharmacists. [1] The six domains identify enabling factors and include the characteristics, skills and experience of the pharmacist; relationships; scopes of practice; connectivity; localisation; and sustainability. The framework was published after the commencement of the IPAC project, however has similarities across the domains, with the protocol for the IPAC project. [58]

Challenges or barriers for pharmacists working in primary health care

Lack of co-operation from GPs [46] has been identified as a key barrier to effective integration of a pharmacist into a primary health care team. This lack of co-operation may be due to GP feeling threatened by the

pharmacist's role [53, 59, 60] or, lack of understanding of the pharmacist's role [24, 51, 61] Nurses have also felt threatened by the role [60]. The lack of collaboration may have been caused by, lack of communication [41] and a lack of existing relationships [51]. Hostile relationships with the community pharmacists has also been found to be a barrier to effective integration of a clinical pharmacist into the practice team [46, 53, 60].

A lack of resources, for example consulting room space and computer software posed logistical challenges and barriers to the employment of a pharmacist for some health services [23, 48, 56, 62]. A lack of pharmacist remuneration and government funding for the service [24, 49, 51, 59, 63] and the limited availability of the clinical pharmacist (some between 4 to 8 hours per week) [46, 61] were also barriers. Furthermore, having no space in the practice to accommodate the pharmacist was a key resource and logistical challenge

Other key barriers and challenges for pharmacists in primary health care cited in the literature include:

- Patient resistance to the service and difficulty recruiting patients [46, 59];
- Difficulty accessing medical records [41];
- Only a 'pilot project' so reluctance by other team members to integrate [61]; and
- No orientation or support for the pharmacist from health service management [61].

1.6 IPAC Project

In order to investigate the potential gains in health outcomes arising from integrated models of care, the *Integrating Pharmacists within Aboriginal Community Controlled Health Services (ACCHSs) to improve Chronic Disease Management* (IPAC) Project was developed in 2017. The project aimed to determine if including a registered non-dispensing pharmacist as part of the PHC team within ACCHSs (the intervention) leads to improvements in the quality of the care received by Aboriginal and Torres Strait Islander peoples with chronic diseases. The theory for the project suggests that pharmacists will facilitate increased access to medication-related expertise and assessments, which when coupled with increased engagement with participants, staff and other stakeholders, will result in increased services, improved quality use of medicines and patient health outcomes.

The IPAC project targeted adult patients with chronic diseases to optimise the pharmacological management of their condition. There is evidence that the Aboriginal and Torres Strait Islander mortality gap due to chronic disease can be especially attributed to coronary heart disease (22% of the mortality gap); diabetes (12%); chronic lower respiratory disease such as chronic obstructive pulmonary disease (6%), and cerebrovascular diseases, such as stroke (5%) [64].

The IPAC Project made two clinical claims. Firstly, patients who are managed by this model of care, involving delivery of services by a pharmacist integrated within ACCHSs, experience either equivalent or superior quality of care outcomes for Aboriginal and/or Torres Strait Islander adult patients with chronic disease compared to baseline data representing pre-intervention. Secondly, appropriate funding for services provided by pharmacists within ACCHSs is likely to lead to superior health care service utilisation (towards equity) of patients with chronic disease compared to utilisation at baseline (pre-intervention). This report describes the outcomes of the qualitative evaluation of the intervention within a community-based participatory research model.

IPAC Pharmacists were supported to be integrated within ACCHSs by:

- Functioning under governance, cultural, and clinical protocols within ACCHS with identified positions and roles;
- Having shared access to clinical information systems to facilitate data sharing and aligned practice;
- Delivering continuous clinical care to patients (working within health service teams, undertaking patient follow-up);
- Communication with GPs and supporting patient self-management, etc);
- Receiving administrative supports from primary health care staff and joint education;

- Sharing the same visions and goals as the ACCHS and supporting shared goal formation with other services;
- Being physically co-located with clinic staff.

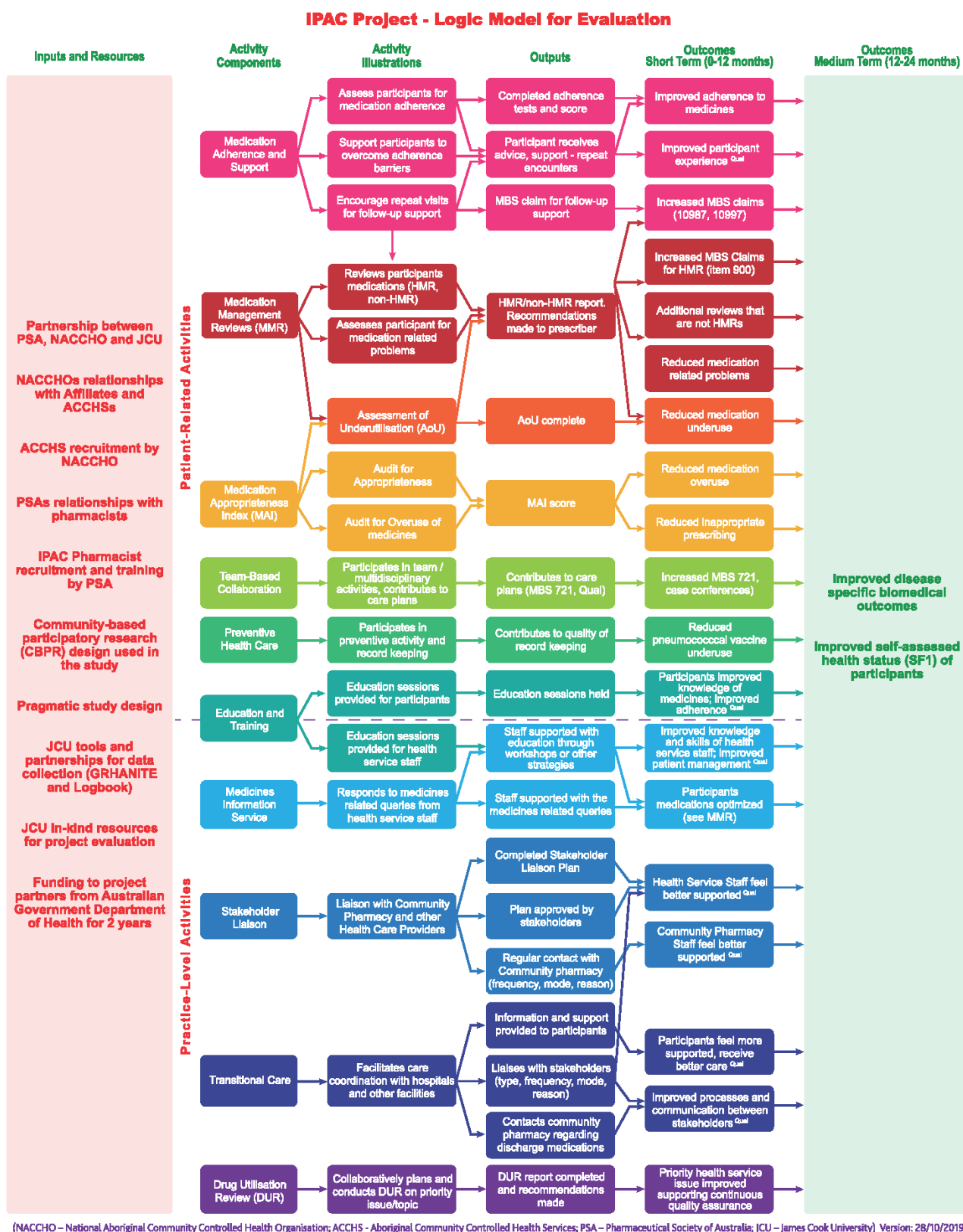
Financial integration within ACCHSs did not occur as pharmacists were externally funded by the project. (Based on international consensus criteria for integration processes: [36].

1.7 Pharmacists' Core Roles (the Intervention)

IPAC pharmacists delivered non-dispensing services within an ACCHS through a coordinated, collaborative and integrated approach to improve the quality of care of patients. The intervention was designed to be delivered at two levels: 1) targeting patients, and 2) health professionals and systems. Ten core roles were delivered over the 12-15 months' intervention phase. The Logic Model for the Evaluation outlines the roles and the expected outputs and outcomes from each (see Figure 1).

The first five months of this project focussed on participant recruitment whilst the remainder of this period comprised participant follow-up activities. Activities targeting patients included the assessment of medication management through medication reviews (including HMRs and non-HMRs), medication adherence and appropriateness, medication-related problems, improving patient medication knowledge and giving preventive health advice. Pharmacists undertook an audit of medication appropriateness for a sample of participants at the rate of 30 participants per 1 FTE (pro rata). Activities targeting health professionals and systems included conducting education sessions, responding to medication-related queries, reviewing prescribing, mentoring new prescribers, participating in case conferences, undertaking drug utilisation reviews, and liaising with community pharmacy and other stakeholders to ensure continuity of care and transitional care that supports patients discharged from hospital [25]. Participants were reviewed according to clinical needs and Medicare rules. Additional roles as specified by services and the service agreement were included to reflect the pragmatic approach to the intervention and evaluation of 'real-life' health service roles.

Figure 1. Logic Model for Evaluation



2. Methodology

This report outlines the methodology and results of the qualitative evaluation component of the IPAC project. For an expanded overview of the methodology of the intervention please refer to the project protocol [58].

Three main strategies were used to collect data to inform the qualitative evaluation of the project:

4. Semi-structured interviews with IPAC pharmacists;
5. Mixed methods online surveys with GPs, CEO and managers and community pharmacists; and
6. Site-visits comprising focus groups and interviews with health services staff and patients, interviews with the IPAC pharmacists, including shadowing and observation.

The purpose of the qualitative evaluation was to obtain data on perceptions of health service staff and patients of having an integrated pharmacist and explore project effectiveness including an in-depth assessment of implementation in an urban, regional and remote setting. Data to inform the qualitative evaluation was collected between June and August 2019 after IPAC pharmacist placements within ACCHSs for at least six months.

2.1 Semi-structured interviews with IPAC Pharmacists

2.1.1 Rationale

Interviews with the IPAC pharmacists collected their perspectives on how well the project was able to be implemented within their health service and explored their perceptions on how well they were able to integrate into the primary health care team, the quality of relationships with other health care providers (internal and external), changes and impacts on the health service and overall effectiveness of their role. In addition, it was important to evaluate aspects of the project including their induction and preparedness for the role, processes for patient recruitment and consent, the project resources and generally what worked and didn't. The interactions IPAC pharmacists had with patients and whether they perceived their interactions with patients had had any impact were also explored.

2.1.2 Tools

An interview proforma was developed by the qualitative evaluation team based on the project protocol and considering issues emerging throughout the implementation of the IPAC project. The proforma was distributed to the project operational team, the steering committee and the evaluation team for comment. Feedback was taken into consideration and a revised version distributed for further feedback. While there were many questions in the templates it was noted that focus groups and interviews would be conversational and not all questions were likely to be asked. Sub-questions were provided to prompt the interviewer if required. Five quantitative questions were subsequently included in the proforma after consultation with team members, as the interview was seen as a formal way to collect this data, in the absence of another process.

The proforma was piloted with a pharmacist member of the project operational team and final edits in wording and structure were made (see Appendix B). The interviews were undertaken by two researchers. The pilot interview and the first few interviews were undertaken by both researchers to ensure consistency in approach and implementation of the interviews.

Following the initial interviews and the semi-structured nature of the investigation an additional question was introduced *"Can you give me a picture of your service?"* Including this question served two purposes: firstly, it fit in well with the rapport building questions; and secondly, it provided contextual details of the service in which the pharmacist worked and obtained information about the local community and its' location. Pharmacists may have been prompted with *"How many GPs are there? Are they permanent/stable or locums? Is there a local hospital?"* prior to asking questions about how they collaborate with other health care providers.

2.1.3 Recruitment

All IPAC pharmacists who had been recruited and commenced work in the IPAC project were invited to participate in an interview, with the exception of one pharmacist who had commenced but only worked two weeks in the role before resigning to relocate for other commitments. Other pharmacists who had spent some time in the role but had since resigned were also invited to participate. The PSA provided contact details of the pharmacists.

IPAC pharmacists were invited to participate via email and provided with a list of potential interview times. A time convenient for the pharmacist was confirmed for the interview. The day prior to the interview a reminder was emailed to the pharmacist along with the five quantitative questions to allow them time to think about these and prepare a response. Only approximations were requested. Pharmacists had already received a copy of the information sheet and had signed a consent form upon employment which covered the qualitative component of the project.

The results of the data collected from pharmacists were validated through a workshop held at the NACCHO Conference in early November 2019. The workshop, facilitated by the PSA Project Coordinators, discussed enablers and barriers to the pharmacists' role. The outcomes of the discussions aligned with the results presented in this report.

2.2 Mixed methods online surveys

2.2.1 Rationale

Online surveys with ACCHS' GPs, CEOs and managers aimed to collect information from their perspective on how well the project was able to be implemented within the health service in which they worked, and the impact of the IPAC pharmacists' role on staff and patients. Perceptions were elicited on how well the IPAC pharmacist integrated into the primary health care team, their relationships with other health care providers (internal and external), changes and impacts on the health service and the overall effectiveness of their role. Managers and GPs observations of the IPAC pharmacists' interactions with patients and impacts were also sought. In addition, it was important to evaluate process aspects of the project including induction, patient recruitment and consent processes, the project resources and generally what worked and what didn't work.

Online surveys with the community pharmacies with whom the health service generally worked collected the perspectives community pharmacists on the nature of the project and role, engagement with the IPAC pharmacists, collaboration with the health service and any changes that impacted on their work.

2.2.2 Tools

Questions were developed by the qualitative evaluation team based on the project protocol and considering issues that had emerged throughout the implementation of the IPAC project. The draft questions were distributed to the project operational team, the steering committee and the evaluation team for comment. Feedback was taken into consideration and revised versions distributed for further feedback. The questions were converted into the online survey monkey tool and piloted by the project operational team members and relevant members from the evaluation team. Reordering of some questions and a few minor changes to wording were made in response to the piloting. The online surveys were a combination of yes/no responses, Likert-style and 'slider' rating scales and open-ended questions. Demographic questions collected data on gender, age group, role and experience working within (or with) ACCHSs. The tools are presented in Appendices C, D and E.

2.2.3 Recruitment

The NACCHO and PSA Project Coordinators provided the names and email addresses of recommended recipients at all 20 ACCHSsⁱⁱ participating in the project, and the community pharmacies for the online surveys. These contacts were generally individuals with whom they had contact in the development and implementation of the intervention. An email invitation was sent to all recommended recipients with a copy of the information sheet and link to the respective survey. Consent to participate was obtained at the start of the online survey, and completion of the survey was considered evidence of consent.

CEOs and Managers

Nominated managers were invited to participate in the qualitative evaluation, including one from a service that withdrew and others from a service that discontinued the implementation phase. A total of 38 CEOs and managers who were identified as the key contacts for the project were invited. Invitations were sent by email with two follow-up reminder emails. A phone call from the NACCHO Project Coordinators was also made encouraging managers to participate.

GPs

Email invitations were sent directly to 11 nominated GPs and to an additional 10 other contacts within the health services who were tasked with liaising with their local GPs. This approach was recommended by health managers as it was reported that GPs did not regularly action requests sent via emails. The original invitations were followed up with two follow-up reminder emails. The NACCHO Project Coordinators also encouraged participation by GPs through phone calls to the managers at each service. Managers were requested to follow-up with their GPs.

Community Pharmacists

A total of 23 community pharmacies were invited to participate and provide feedback on the IPAC project. Community pharmacies were identified by participating ACCHSs as those that were their main provider/s of services. Invitations were sent by email with two follow-up reminder emails sent.

2.3 Site-visits

2.3.1 Rationale

Site visits to ACCHSs provided the researchers/evaluators with the opportunity for in-depth exploration of how well the intervention had been implemented in different settings. Through focus groups and interviews with health services staff and patients, and observation of the IPAC pharmacist for a day, the researchers collected information on how well the IPAC pharmacists were integrated within the health service, and the impact of the role on staff and patients. Perceptions were elicited on how well the IPAC pharmacist integrated into the primary health care team, their relationships with other health care providers (internal and external), changes and impacts on the health service, and the overall effectiveness of their role. In addition, it was important to evaluate process aspects of the project including induction, consent, resources and generally what worked and what didn't work. The patient experience was explored through focus groups and individual interviews.

2.3.2 Tools

Proformas for the focus groups and individual interviews with health service staff were developed in conjunction with the online surveys and both explored the same question themes. However, the interviews enabled other issues raised or reasoning to be further explored through discussions.

Proformas for the patient focus groups and interviews were developed by the qualitative evaluation team based on the project protocol and considering issues that had emerged throughout the implementation of the IPAC project.

ⁱⁱ IPAC Project quantitative reports are based on patient data from 18 ACCHSs due to the discontinuation of two services in the implementation phase of the project.

An observation framework was also developed by the qualitative evaluation team to guide aspects of practice that may be witnessed throughout the site visit, and shadowing of the IPAC pharmacist. The framework also noted documents that may be available for collection and potential evidence of the use of resources for project promotion. For example, photographs were taken of any signs and posters about pharmacists, the project or medicines, and clinic layout. Examples of documents collected included medicine's-related patient resources; newsletter articles and other documents.

All tools were distributed to the project operational team, the steering committee and the evaluation team for comment. The Project Reference Group (PRG) comprised representatives from all participating ACCHSs, NACCHO Affiliates and NACCHO and also had the opportunity to provide input into the patient and health service staff proformas for the focus groups and interviews. Feedback was taken into consideration and revised versions distributed for further feedback. Two Aboriginal academics on the evaluation team were consulted and provided edits to the wording to ensure that the language used was culturally appropriate and would be more likely to be understood by patients. While there were many questions in the templates it was noted that focus groups and interviews would be conversational and not all questions were likely to be asked. Sub-questions were provided to prompt the interviewer if required.

The interview proformas were piloted by relevant members from the evaluation team. Reordering of some questions and a few minor changes to wording were made in response to the piloting. The tools are presented in Appendices F, G and H.

2.3.3 Recruitment

All ACCHSs participating in the IPAC project were offered the opportunity to nominate to be involved in a site visit for the qualitative evaluation of the project (see Appendix I). Only services that nominated were eligible to be selected for the visit in line with CBPR. Other selection criteria included geographical dispersion (ensuring a service from each setting - urban, regional and remote); a site with good patient recruitment and a high level of pharmacist activity; and pharmacist FTE.

Six (6) ACCHSs nominated to be involved in the qualitative evaluation: one each from the Northern Territory and Victoria, and four from Queensland. The qualitative evaluation team assessed each site against the selection criteria and recommended sites for selection. These recommendations were sent to the project operational team for comment, and PRG for discussion and endorsement (see Appendix J). The site recommendations were endorsed in the PRG meeting on 22 February 2019. The steering committee noted the selected sites and endorsement by the PRG in their meeting on 5 March 2019.

The three (3) ACCHSs were visited as 'case study' sites for qualitative data collection in July – August 2019. Site-visit fieldwork was undertaken over a three-day period at each service by two qualitative researchers experienced in health services research. The researchers were supported by an experienced Aboriginal academic who led community liaison and provided advice on cultural safety.

Service staff and/or IPAC pharmacists assisted the research team prepare for the visits by recruiting appropriate patients who would be willing to be part of a focus group or interview and assisting them to attend. Assistance was also provided in answering questions and arranging logistical issues including rooms. Some ACCHS staff were also asked to participate in a focus group or interview. Appendix K outlines the Site Visit overview and preparatory tasks. At the conclusion of the focus groups and interviews patients were offered a \$20 gift card as a thank you and compensation for their time and travel.

The site-visit fieldwork data collection activities included:

- Non-participant observation of pharmacist for one work day (Shadowing)
- Photographs, collection of relevant documents
- Focus group discussion with patients
- In-depth semi-structured interview with one patient

- Focus group discussion or individual interview/s with health service staff (Aboriginal Health Workers/Practitioners/CEOs/ Practice Managers / GPs)
- Semi-structured interview with the IPAC pharmacist/s

2.4 Data analysis

2.4.1 Interviews and focus group data

All interviews and focus group discussions were audio-recorded, transcribed verbatim through the program TRINT and imported to the qualitative management software package, NVivo 12 [65] to facilitate data management and qualitative analysis by the research team. Initially, deductive analysis, using the interview questions as a framework were performed as a classifying framework. Subsequently line by line inductive thematic analysis was employed by the research team. Each transcript was independently coded by one member of the research team. One member coded two transcripts from each of the other members to cross-check the coding and verify the accuracy of coding. The team met on several occasions to discuss the codes and emerging themes. Differences between team members were resolved by consensus where the team returned to the transcripts to consider and verify the context of the differences. Further investigation of coder differences has improved the quality of the analysis and conclusions.

Together, the coding team aggregated the codes into overarching themes. The team considered any variations between sites and between types of service providers (e.g. pharmacists, GPs, Aboriginal Health Workers) and managers although care will be taken in reporting to avoid compromising anonymity. A formal multiple case study approach is beyond the scope of this evaluation.

Each case study is presented with:

- Background of service (service, staffing, clinic structure, local issues)
- Profile of pharmacist and their role (integration into the team, communication, relationships with patients and community, key roles)
- Project – induction, patient recruitment and consent processes, resources, enablers and challenges, benefits, general implementation
- Patient cases studies outlining the impact that the pharmacist role has had on individual patients. This data has been triangulated from different sources where possible.
- Health systems changes facilitated by the pharmacist

2.4.2 Survey data

Basic descriptive statistics (frequencies, means and percentages) were used to summarise the participant characteristics and various aspects of the intervention under investigation. A simple content analysis of open-ended responses was undertaken grouping responses into categories. The researchers met to discuss and cross-check emerging categories and associated frequencies for these.

2.5 Rigour and Trustworthiness

Various strategies were used throughout the analysis to enhance qualitative rigour and trustworthiness of findings. Regular meetings to discuss interpretation of codes and themes, sharing of memos and notes, co-coding of qualitative data, data triangulation (using multiple data collection methods and sources including interviews with a range of services, documents and field notes) and consideration of disparate views will ensure balanced investigation of service provider perspectives. Provision of ample and rich quotes from participants are provided to enhance the connection between data and conclusions.

2.6 Ethics

Ethics approval for the project was received from four ethics committees in the three jurisdictions including St Vincent's Hospital Melbourne (SVHM) Human Research Ethics Committee (HREC), Victoria (HREC/17/SVHM/280), James Cook University HREC (mutual recognition of SVHM HREC, approval

HREC/H7348), Menzies School of Health Research (HREC/2018-3072) and the Central Australian HREC (HREC/CA-18-3085). Consent processes for participants are outlined above.

2.7 Data storage

Qualitative data was stored and transported as follows:

- Qualitative interviews and focus group discussions (including video or telephone interviews) were recorded on a digital recorder and stored in a password-protected file.
- Photographs were taken on a password-protected mobile phone.
- Field notes were recorded on a digital recorder and in a notebook (non-participant observation/pharmacist shadowing).
- During field work all digital files (recorded interviews, field notes and photographs) were downloaded to a password-protected laptop and stored on a password-protected file immediately after interviews or field work.
- All electronic files (digital recordings and photos) were removed from recording devices (recorder and mobile phone) immediately once transferred to the laptop.
- All electronic files were stored on password-protected computers during and after the project (under the control of the data custodian).
- Identifying information were removed from data collected immediately after the interviews and focus group discussions have been transcribed.
- Paper copies of any identifiable project data are stored in a locked filing cabinet, in a lockable room (i.e. Field notes, paper-based forms, and photographs).
- Electronic questionnaire data collected was stored in a password-protected 'Survey Monkey' account until the end of the data collection period. At that time, the data was downloaded and stored on a password-protected computer, under the management of the data custodian.

3. Results

3.1 Pharmacist Interviews

Twenty-four (24) IPAC pharmacists out of the 25 invited provided feedback. Pharmacists represented all 20 health servicesⁱⁱⁱ who participated in the project. One pharmacist did not respond to the invitation and was not followed-up due to illness.

Nineteen pharmacists undertook their interview via video conference (zoom) or teleconference. Interviews ranged from 46 minutes to 123 minutes. In addition, four pharmacists participated in face to face interviews on the 3 site visits; ranging from 63 to 100 minutes. One pharmacist provided a written response. Nineteen of the pharmacists were currently working in the role, four had resigned and one had provided services to an ACCHS who subsequently withdrew from the project.

3.1.1 Background of Pharmacists

Of the pharmacists enrolled in the IPAC project, four were international pharmacy graduates, and the remainder had studied in a variety of Australian institutions (including QUT, JCU, US, UQ, Monash, CSU, and La Trobe). With the exception of one JCU and one QUT graduate, most said that they remember having either very little or no placements which situated them in a rural or remote setting or placed them in a setting where there were Aboriginal and Torres Strait Islander patients. *"The only rural placement that I did was on the Sunshine Coast, and that was considered rural."* (Pharm19)

Prior to their role in the IPAC project, most pharmacists had at least 12 months' experience in a rural or remote setting within or similar location to their IPAC role, and in managing the care of Aboriginal and Torres Strait Islander patients. However, most of these had well over 12 months' experience, with many citing they had spent between 5 and 15 years in these practice locations before the IPAC project commenced. This includes three who were raised in the same or neighbouring town to where they practiced and indicated their desire to support the communities in which they were raised. *"[Town] is home and always has been, so I just went away for university and then came back"* (Pharm04). These previous experiences also involved travelling from their main site to neighbouring communities, where they developed strong relationships with the people, they helped during the IPAC project.

"I am hardly ever in [town], most of the time I am in the communities' (Pharm24), 'I get a lot more understanding of their social structure and what is actually happening with the patients from being at the practice." (Pharm06)

"I was very fortunate in that I already have relationships both with the clinic but also with the community here. So, my face is kind of known around town and the community here." (Pharm01)

Another primary driver behind working in these rural and remote locations was the desire to try 'something different' and to 'get away from the big city'.

"When this job came up through the pharmacy I was working at, it just was a good opportunity. I felt that was where the profession needs to move to, so I jumped on it." (Pharm03)

"When the opportunity came forward, I could play a role that was a great thing to experience." (Pharm05)

ⁱⁱⁱ IPAC Project quantitative reports are based on patient data from 18 ACCHSs due to the discontinuation of two services in the implementation phase of the project.

"I saw an ad in December 2014 looking for someone for four weeks in the [remote community]. I haven't been back since." (Pharm18)

Apart from experience in the community or hospital pharmacist setting, additional clinical experience prior to the IPAC role was varied. Half of the pharmacists cited significant experience in conducting HMRs and Residential Medication Management Reviews (RMMRs), two also had nursing degrees, and four had research experience.

"I'll be coming up to 10 years accredited having done over, I would guess over 400 HMRs." (Pharm09)

"Just ticked over my 10-year HMR anniversary, and then I went part time at the hospital so I could do HMRs as well, which I did around [town] for Indigenous and non-Indigenous patients." (Pharm20)

3.1.2 Background of Services

The clinics/services in which these pharmacists were placed were quite varied in terms of their size, services provided, and mode of providing these services. Half of the pharmacists described their services as being well staffed and providing a broad range of services for patients through the use of a variety of health professionals, such as diabetic educators, dentists, men's and women's/maternal health specialists, and Aboriginal Health Workers. Factors that led to having what was considered a strong service included having Aboriginal Health Workers present who could provide support and translate when needed, staff who were full time and permanent, and strong communication between the staff.

Conversely, half of the pharmacists reported understaffing, particularly of full-time doctors and Aboriginal Health Workers. This resulted in poor communication and a lack of follow-up.

"The most challenging thing that was happening...because a GP was coming every two weeks, a different GP with difference experience and cannot follow up with patients there. Also, a sense of frustration from some of the patients." (Pharm08)

3.1.3 Pharmacists' Role in IPAC

Expectations

There was a diverse range of expectations from the pharmacists, ranging from having no expectations, to mixed expectations, to very high expectations on what they anticipated their role would be.

"Oh, it's been a lot more interesting and I've been doing a lot more than I expected." (Pharm14)

"So, I'm not sure I actually knew what to expect when we went out there and I don't actually think the clinic knew what to expect either." (Pharm10)

As there have been very few pharmacists previously working in ACCHSs there is little understanding of the role of an integrated pharmacist in this setting. This resulted in pharmacists having to be more proactive in promoting their services and proving their value: *"I think the difficulty with this project has been that it's a very new role for a lot of these clinics and the staff out there had no idea what a pharmacist did" (Pharm10).*

The training provided by the PSA assisted pharmacists by providing an expected scope of practice and roles to be carried out, though there was still a level of uncertainty. *"I knew we had the training which is amazing, and I learned so much through the PSA training, but then what you learn on paper is never what it is in real life" (Pharm04).*

Certain aspects of the pharmacist's role were more closely aligned with what they expected, such as the provision of medication-related information and conducting HMRs, whilst other activities were unexpected though generally well received by the pharmacists.

"My role here is much broader than I had expected. I had thought it was just going to be a clinically supported role to the GP essentially, patient education things like that, but so much more, which is great, I love it because that's the education and clinical going on here." (Pharm02)

Utilisation of Skills & Expertise

Pharmacists delivered the ten core roles to their respective communities throughout the project. The IPAC pharmacists believed that their physical placement within these services was essential in providing appropriate care to patients as it enabled them to liaise between multiple health professionals within the team and gave them access to patients to whom they could provide essential information on their medications.

"The purpose of embedding a pharmacist in that health care setting is one I felt that the connections that I had with the staff and the connection were very, very good and rewarding on both sides." (Pharm09)

"We deal a lot with the doctors and the physicians, but we never have had much of a decision-making role until we actually ended up in this project and then we were able to have a bit more of a clinical role in ... the patient's medications." (Pharm14)

"These patients get completely overwhelmed by the health system and have very little health literacy and no ability to navigate their way through multiple referrals and so I see my job more than anything, as pulling things together." (Pharm12)

"So, we've been able to sit down with the patient having spent a bit more time with patients outside of the community pharmacy and be able to talk to them about their medicines and educate." (Pharm14)

"I feel like I've really become the conduit between pharmacy, community pharmacies, between hospitals, between doctors, between clients. So, we see people starting to come in and ask to see the pharmacist now." (Pharm17)

The pharmacists also indicated that providing advice on appropriate medication prescribing, following-up and clarifying discharge summaries and prescriptions, conducting HMRs (and similar activities), improving patient adherence to medications, and the provision of staff education on medication safety were their most consistently performed roles. Most pharmacists felt fully utilised in their service, and their skill set was broadened by the experience in the IPAC project.

"So, our Aboriginal health workers here haven't received a great deal of continual education in the workplace ... and [so] I put my hand up I was like hey you know I love education I would love to help." (Pharm02)

"It's made my team collaboration skills better and my perspective on what's important with regards to the patient." (Pharm03)

"That's the biggest thing that people have come up to me and [say] 'We're so happy that you're here because no one knows why they take their medication.' Because no one's ever been in this position before, there's not much that, prior to me starting, there was no governance on medications and that's really big in the other areas in hospitals." (Pharm19)

As staff within these health services became more familiar with the skill-set of the IPAC pharmacists, their roles evolved over time, and the pharmacists were requested to provide more services and deal with more complex patient cases.

"Certainly, over time the role has evolved into more of a medicine information component as well as the staff became more comfortable with my role out there and what they could or couldn't expect from me. They've come to ask me more about those therapeutic options ...whereas in the start [they] would possibly come and ask me if a dose was correct. But now they've come to ask me more in-depth things... asking me about drug interactions and that sort of thing." (Pharm10)

Pharmacist access to the patient's electronic medical records such as the Communicare clinical information system (CIS) was seen as an enabling factor to improving patient's health, by allowing pharmacists develop a more accurate view of the patient's health.

"You can see compliance is the issue and compliance is really funny because you look at Communicare and the nurses [have] written 'Oh no, they say they take it every day' and then you just go through the notes and see when they've collected and haven't collected it for six months." (Pharm18)

"You can help with that transitional care which has been really rewarding I think and time consuming. ... there's just no one else that would do that role. Like community pharmacy doesn't have time to do that stuff and they don't have access to Communicare, so they can't really see it." (Pharm20)

Being physically present during case conferencing and staff meetings was also seen as beneficial in ensuring that the recommendations being made by pharmacists were utilised.

"I do reviews for them and we set up times for case conferencing and that's been really handy for... getting my recommendations actioned...because just sending reports is no good." (Pharm16)

For these skills and services to be fully utilised, staff within the health services were often required to be informed as to the scope of practice of pharmacists and the processes for referral and consultation.

"...starting to realize they can use me... like the health promotions person said, 'oh the mental health team were quizzing about medications and stuff' ... we've actually got a pharmacist, we will organize a session for you." (Pharm13)

"I was attending the meetings, the clinical meetings they have. I was putting pharmacist input in lots of things and from my point of view I find it very useful... they didn't realise how a pharmacist could be useful in Aboriginal Health but then after me attending some meetings and doing some in-services they kind of: 'ah, he can do this, he can do that.' (Pharm05)

Meeting Organisational Requirements

When asked if they felt they were meeting organisational requirements, half of the pharmacists believed that they were, with a few indicating that they felt they had exceeded these requirements and had become an integral part of the health service.

"I feel like they've been pleasantly surprised with the things I've managed to help them with." (Pharm10)

"Just getting more and more reliant on us and we have tried to be mindful when we set things up, set procedures and policies and things like that in place so that if we do go in October then it's not going to fall apart." (Pharm17)

"As you became more familiar with say the medical staff, their ability to draw on you and to get you to review patients could escalate exponentially." (Pharm09)

However, the other half were unsure, or stated that they were not able to meet organisational requirements, which was perceived as a result of being an external person to the health service.

"[I] was seen as an external person, not as an employee. [I] wasn't utilised well due to not being full time and being seen as external." (Pharm08)

"No, because the organization's requirements were that I did my job but didn't actually create any work for them...either they weren't listening or the project wasn't explained in such a way, that they were going to have to work do some work for some of this. And ...I think ... [that's] where the resentment came from." (Pharm22)

The IPAC pharmacists' ability to meet the health services' requirements and conduct appropriate clinical (and other) activities within these health services was also dependent on their working status (part-time or full-time). Smaller services were perceived as only needing a part-time pharmacist, whereas those placed in larger services found that working part-time was insufficient to meet the needs of the service.

"I was doing that over two days, but I actually found that it was really hard to get the staff to see me as part of the team just being out there twice a week, so I elected to spread my hours over three days. Once I switched it to three days which I didn't sort of do until I think it was about five or six months into the project, the staff started to think of me being there more often than not." (Pharm10)

"I was here Tuesday, Wednesday and Thursday. But then when I was at the pharmacy on the Monday and Friday my phone, mobile, would still ring from the services trying to chase things up. So, I can see how ... a full-time position would definitely benefit." (Pharm04)

"It's a full-time service because I noticed when I started, I was underutilized. Now like when I get here on Monday mornings, my in-trays got stuff in it. Yeah, notes from a doctor from Friday going 'you weren't here!'" (Pharm02)

Additional Roles Performed

The expected IPAC pharmacists' activities were grouped into 10 core roles. Most pharmacists did not perform duties outside of these core roles, which were cited as being quite comprehensive and took up the majority of their time.

"I think actually the 10 core roles are very comprehensive because they are all really different and they involve lots of things to be done by the IPAC pharmacist. ... I didn't find myself having to do anything outside of those roles." (Pharm05)

"I think coming in I was [thinking] 'no I need to meet these targets. I can't do anything', ... [I worked] very projects-based. So, I think if I had my time over again, I'd just say ... 'Use me as a pharmacist to the best of the capabilities that their service needs'." (Pharm16)

"I think given the hours, and I think that the role was fairly well set out as is, I think you need some boundaries initially, until you have [been] established in that setting." (Pharm09)

"I think the 10 core roles are exactly what I do. It's just a matter of how and when, and I think they do pretty much cover exactly what you do." (Pharm12)

A few pharmacists took on what they perceived to be additional roles, that they believed were essential to provide to the community, even if they were not patients of the IPAC project. Additional roles included advocacy, activity related to non-chronic disease patients, and participation in responses to outbreaks including health promotion.

"So, these were people that had come to my attention, had got out of jail for example, and/or had just simply dropped off the face of the earth and I went hunting for them. You know, [I] then found out that they needed some help to get back into the health system, as much as getting back into their life." (Pharm23)

"if I come across something such as hydroxychloroquine and somebody is not having their eyes checked, they may not actually be part of the IPAC project in its central core. But I can't leave something like that and not do something about it. If I come across something, I guess I don't even think about the parameters of the project." (Pharm22)

"We had an outbreak of PSGN [Post-Streptococcal Glomerulonephritis] in the community so I was actually part of the teams that went out in terms of doing our [part], when we had to actually mobilize teams to go out into the community and check every child in the community for sores and then have a penicillin injection." (Pharm01)

Also, a few pharmacists found it was difficult to fulfil these core roles due to having limited time, particularly if they were part-time.

"I think I feel like the time frames for actually getting all that done in a day or at least in a part-time position has been very difficult." (Pharm10)

"But I've found quite often I was spending so much time doing it and that maybe possibly at times it wasn't adequately [done]... I found it difficult to demonstrate that within the core roles." (Pharm02)

Negative Aspects of Role

Half of the pharmacists described challenges to implementing the role. Challenges included poor support from ACCHS staff including low referrals, or a poor understanding of the role of the pharmacist within the service.

"It's interesting because my expertise is very clinical and I'm very used to giving doctors feedback, but I don't think the GPs are always...open to it." (Pharm16)

"I think it's also been quite difficult out there to catch patients that would agree to see the pharmacist because not only did the staff not know what a pharmacist did, the [Aboriginal] people had not really experienced them ever." (Pharm09)

"I was kind of already known to the GPs, so I was maybe a little bit disappointed in the amount of referrals that we ended up getting." (Pharm21)

"Wasn't able to fully utilise skills due to lack of exposure to clients, including lack of internal referrals." (Pharm15)

There were also barriers relating to the patient population, staffing shortages, travel, and information technology. *"Lots of IT issues with Communicare, didn't work half the time"* (Pharm07). Pharmacists found that the patient population often had no experience with pharmacists and were therefore not comfortable in discussing their health issues with them, or had language barriers, which affected their effectiveness.

"But the problem was the patients that was refusing the service from the beginning. That was also an issue. If they refuse a service, they refuse the project too." (Pharm08)

"I had no-one to help me. There [were] the nurses, they're really under pressure." (Pharm22)

"You don't get anywhere without really flying. So, it's vital that everyone knows everybody so they make it a lot easier for me to do my job." (Pharm18)

"Nobody in the health service could speak more than a few words of the language. [With] the answers they were giving me as well, [you] have to be really careful in these sorts of settings because people ...especially [if they] don't know someone really well, they'll tell you what they think you want to hear, so you get off their back basically." (Pharm22)

"You can't sort of plan in advance to do home visits for example, or book HMRs in during IPAC time. It was really difficult because it wasn't until that morning when the manager would come in and then, you know who's not coming in for the day, who's called in sick, which clinics do we need to be covered, and then if there's anyone left over you can have them then." (Pharm17)

"You might make appointments with people, but the number of 'no shows' is the, probably the biggest challenge I think. Yesterday, it was a fairly full book and in the morning went along to the doctors there but I think 80 percent of them [patients] didn't show." (Pharm12)

Working in the health service part-time was reported as a barrier, as patients who would benefit from the pharmacists' input, may not come into the clinic on the days the pharmacist was working. Follow-up with these patients was also considered to be more difficult. *"Because they're not necessarily all visiting the clinic at the day that I'm there."* (Pharm05)

Using a rating scale between 1 (not effective) and 10 (fully effective), the IPAC pharmacists rated the overall effectiveness of their roles at an average of 7.9 out of 10 (n=23), with responses ranging from 4 to 10.

3.1.4 Integration into PHC Team

Integration into the primary health care team was mixed. Whilst the majority of pharmacists felt accepted and well-integrated within the team, not all pharmacists felt that way initially. About two-thirds of the pharmacists indicated that there were initial difficulties with staff understanding of the role of the IPAC pharmacist, which led to them being underutilised, highlighted by low referrals. Over time, these issues

appeared to resolve, largely due to the initiative of the pharmacists in educating staff members on how they can contribute to the functioning of the team and health outcomes for patients.

"[I] felt like an outsider at first, though [I] became an integral part of the team, being thought of first to help with problems, [and] frequent communication through many modes. We've really integrated into the clinic so the GPs and nurses are comfortable to just walk in the room and say, 'I've got this person I'm worried about can you come out and chat to them before they go.'" (Pharm11)

"I think at this start... they might not have realized what we could do but then after we sort of did a bit of education and then talked to a few people, I think just by word of mouth people sort of understood and could say the benefit of having us there and what we could do." (Pharm07)

"So, it took time too. To even for the doctors to know what exactly I can do. And now they know me. They rely a lot on me to help them." (Pharm24)

"The acute nurses [have it] hard because [the] turn-over [of] their staff has been quite frequent and because they're often dealing with the acute things that are presenting through the door...even if they have someone who I am trying to catch, they're [the patient is] not often in a state, they're acutely unwell, they don't really want to sit down and have a chat to the pharmacist." (Pharm10)

The remaining pharmacists felt immediately accepted within the teams and able to provide their expertise in the care of patients. This appeared to be more likely in services where the staff were pre-prepared for the arrival of the pharmacist, of where there were staff shortages, or the existing staff had experience with the pharmacist involved in their service.

"You know, actually I felt really involved like and as I said, really, the staff members in general, the Aboriginal health workers and the manager and the nurses, they were very supportive and they were always like asking for my help. They would come and ask me some clinical questions or...needed medical information." (Pharm05)

"But they've all been so lovely. Staff are great. Clients are great across the clinics, like seriously, no complaints at all. Everyone's certainly made me feel really super welcome." (Pharm20)

"They just were really open about, you know, we've got a new staff member. This is what her role is, get her involved, that sort of stuff." (Pharm03)

Pharmacists were asked to rate their level of integration (at the time of the interview) on a rating scale from 1 (not integrated into team) to 10 (fully integrated into team). They self-rated their level of integration into the primary health care team with an average of 7.7 out of 10 (n=25, one pharmacist practiced in two services).

However, even after successful integration within the teams, there were ongoing barriers that the pharmacists felt reduced their ability to provide services. This included working part-time and working in health services where there was frequent staff turnover.

"That's the only limitation. I've only been here a couple of days a week, you do sort of get quite forgotten from week to week...clinical meetings where everybody got together, but funnily enough the days that I was working, that wasn't when the meeting was on, so you are sort of left out of the loop there." (Pharm12)

"The barrier ...if the staff aren't convinced or aren't used to having someone there and ... I'm not there very often." (Pharm18)

"So, I think integrating into the team did get a lot easier once I was there more days. And once the staff became comfortable with my role as a pharmacist." (Pharm10)

PHC team understanding of IPAC role

A poor understanding or awareness of the purpose of the IPAC pharmacist (especially initially) was considered the greatest inhibiting factor for integration into the PHC team. Staff who did not have previous experience with pharmacists were particularly difficult to engage with, and even those who did have experience with pharmacists were confused by the concept of a non-dispensing pharmacist.

"So I think at this start, there was a bit, they might not have realized what we could do but then after we sort of did a bit of education and then talked to a few people, I think just by word of mouth, people sort of understood and could say the benefit of having us there and what we could do." (Pharm07)

"Someone told me they didn't know what I was doing there. There wasn't anything I was doing that they weren't doing." (Pharm18)

"When I started on my first day...no one kind of knew that I was even here and... what I was here for." (Pharm19)

"At the start they really didn't know what we were doing. There was a lot of misconception that we were to dispense...clients and some of the other allied health [and] other team members are thinking 'oh ... can they bring you scripts?'" (Pharm17)

This confusion and underutilisation of the pharmacist's role (including referrals) was ongoing for some pharmacists. Nurses in particular were sometimes unsupportive of the IPAC pharmacist, which was considered to be either a result of their being used to performing these roles themselves, or feeling intruded upon and having important roles being taken away from them.

"I reckon probably the RNs and the AHPs wouldn't know exactly what it is that I'm doing still in some of the sites." (Pharm20)

Not to the full capacity...I think that they understand that I know about medicines, that I can talk to patients about medications and do a review and all of that kind of thing, but I don't think that they quite see the, like grasp how big this could be or how important it could be." (Pharm19)

"Not fully no, even though they were all, they were all introduced. I think that some of the nurses felt I was just being intrusive because they had their system" (Pharm22)

"I think again they were like... 'What are you doing here? Why are you here? Are you stepping on my territory?' So we didn't get off to a great start, and ... I literally sat down one day and was like 'ok, I'm not here to take away your work'." (Pharm02)

Even when staff had met the pharmacists prior to the project, in a different setting, they were unclear of the role of a non-dispensing pharmacist: *"When I first started one of the GPs who was working here, I've actually known for years from my work and she is an older doctor and she was one of the ones who said: 'what the hell are you doing here, and what do you do?'" (Pharm12)*

There were, however, some pharmacists who as previously mentioned felt immediately welcomed and well-utilised within the PHC team, as a result of a good understanding of the knowledge and skill-base of pharmacists.

"I always felt welcome, I always felt appreciated by all the skill. There was even a psychologist, she used to go there on Fridays, and she referred patients to me more than once ... so I feel really appreciated." (Pharm05)

Champions and Staff Support

Most pharmacists had a person they considered someone who championed their role and assisted in overcoming the aforementioned issues of poor staff understanding of the role of a non-dispensing pharmacist. These champions were usually a manager with the team, who likely had a better understanding of the overall needs of the service, as opposed to individual health professionals.

"I think [we are] very lucky to have [name] as a clinical director. She is super supportive of the pharmacy services. So, I think that came down from the top that very clear it was a good service." (Pharm21)

"My number one champion would be [Aunty AHW] who's amazing, an amazing health worker that probably volunteered in the first instance to help me out...Our practice manager [name] is very supportive of the project and ... improving the scope of practice." (Pharm01)

"The allied health coordinator, without her I probably would have quit after Week 1." (Pharm04)

"Our manager at the time, was wonderfully supportive of anything we suggested." (Pharm11)

However, several pharmacists felt they had no champion, which was a consequence of staff turnover, poor understanding of the purpose of the non-dispensing pharmacist, or internal politics.

"There's no real champion here that really gets it because I think the champions have now left, and I don't think they really got their head around it to start with anyway." (Pharm16)

"I think from day one this health service was under a lot of pressure- the staff were very upset. I think everybody was pretty much preoccupied with the internal politics that were going on. There was one GP who welcomed ... me on my first day and she didn't, I don't think she even knew I was arriving that day." (Pharm09)

In general, regardless of the level of understanding of the staff on the role of the pharmacist, staff were generally supportive of the pharmacist and assisted in their activities when possible.

"I had a huge support from everyone in the Aboriginal service where it was from the manager to all Aboriginal workers there. So, I really enjoyed my time there. And we worked really hard together and to just make it as successful as possible." (Pharm05)

"I know and they're all so friendly, so I feel I'm able to approach all of them if there is anything I need to discuss or do with any of them." (Pharm06)

Support from health services

Integration within the health services and utilisation of the pharmacists' knowledge base was supported by several factors. Factors that were particularly beneficial at the commencement of the project included the

provision of a staff uniform, use of promotional resources, and introduction of the pharmacist to the health service team.

Staff uniforms allowed the pharmacists to identify themselves as a member of the team, both the patients and to other staff members, rather than being seen as an external health professional.

"It makes a big difference having the shirt. You are part of the team, you're one of the good guys." (Pharm20)

"The manager organized the meeting, she introduced me and explained exactly how I could help, and I had really huge support from everybody. I mean...most of them at one stage had something to ask me or to seek my help with." (Pharm05)

"As soon as you have this blue shirt [staff uniform] on everyone knows that you're a safe person to talk to." (Pharm11)

The pharmacists who were not provided with a shirt/uniform (even after asking) indicated that it was a disappointing issue that may have affected their integration within the team, and the health service.

"I would have loved one of those [uniform] and we actually spoke about it, but it never happened." (Pharm12)

"No, I know ... other IPAC pharmacists had been given Aboriginal type clothing to wear and I had raised it with the health service manager and others, but nothing ever happened." (Pharm09)

"I felt that as a new face at the health service, a uniform would have been a great identifier for me to be viewed as part of the team." (Pharm15)

Promotional resources such as posters, newsletters, and social media were utilised in a few of the health services and were considered beneficial in alerting patients to the services of the pharmacist and their intended benefits to patient health.

"We're in the phone book. We've got fliers everywhere and they've let us put the IPAC poster up, so people will say I saw your photo in town or I saw your photo in [town]. So, they've just yeah and even at [town] we've just got a new board put up with all the people who work there and there's a space for pharmacists" (Pharm11)

"When I first started, they put they put it in the newsletter and then ... they put it on the social media when I first started as well. They had a poster up in reception and in the triage room for quite a while. We had some like some medication pamphlets with my information on the back of it. So, they [pamphlets] were sitting in reception as well" (Pharm04)

Throughout the IPAC project, factors that had ongoing effects on pharmacist utilisation included their involvement in general staff meetings and clinical meetings (described in previous sections), and their physical location within the service. There were positive and negative aspects to having either their own consulting room or office, or a shared office with other team members in the health service. Pharmacists who had their own office were able to discuss private matters with staff or patients easily and provided sufficient space to perform clinical activities (such as demonstrating inhaler devices and perform blood

pressure monitoring). However, some pharmacists found that this isolated them from other team members and affected their visibility and integration within the healthcare team.

"I'm lucky I've got a meeting room that has got a [computer] and that's actually been a benefit being able for people to come and go out of that [room]. I think if I had an office I would be less happy and there'd be less interaction with people to get that connection out there." (Pharm18)

The location of the office was also important, with several pharmacists indicating that if their office was next to the GPs office, or next to the waiting room, it allowed them to have greater visibility and accessibility

"Yes, I have my own room. And most of the time next to the GP, they like me to be next to the GP." (Pharm24)

Pharmacists who shared a space with other workers said that it could help with engaging with other staff and patients.

"Quite often I would jump into [consultations] with the chronic disease and the complex care nurses. They would just call me when they had a patient that I'd been chasing or that they wanted me to see." (Pharm10)

"So, I have a little space at the clinic which is actually with the health workers in their area which is great and that's been very good for me in terms of team building and rapport building with the health workers or the community members that I work with closely." (Pharm01)

However, this often meant that they were frequently moving office, depending on what other staff were doing, which caused a flow-on effect on where the pharmacist was located throughout the day.

"When I started, I was sort of sharing with a health worker and ... I felt really bad because I thought I have to kick them out to talk to someone in the room." (Pharm07)

"I think that's been a bit of a barrier to the success of the project because there's just been not enough consistency in it. So, some days, well at the start of the project, I was working between the two clinics and then I would get asked to go on a trip up to one of the other sites, and then I come back and there's not a room available." (Pharm19)

"The reflex paper boxes that I kept my paperwork in and I just shuttled that round the tea room in which there were two computers at one end. Those computers had to be shared with one or two of the nurses as well." (Pharm22)

"There wasn't a room specially created for me and I often felt like an inconvenience as I bounced around different consulting rooms/interview rooms depending on the day." (Pharm15)

3.1.5 Collaboration and Relationships with Other Health Professionals

The support of other health professionals within the health services were seen as key predictors of pharmacist utilisation. GPs, nurses, Aboriginal Health Workers, and other allied health staff were all described by the IPAC pharmacists as playing a role in receiving referrals, and a source of patient and staff education activities.

GP Collaboration and Uptake of Recommendations

All pharmacists within the IPAC project found that most GPs were supportive of their role within the health service. They were open to communication, provided referrals for patients who needed medications reviews and education, and utilised the pharmacists' recommendations.

"So, the four doctors that I've really worked with, three have been absolutely 100 percent supportive and one's becoming more and more...willing to involve me early. I might be deluded but I don't think I've had any issues at all. Everything's been very positive." (Pharm23)

"They've certainly made me feel welcome and been happy for input... Even with the locum doctors that we've had coming through I haven't had any resistance in terms of them [saying] 'oh what are you doing here. We don't need the pharmacists', that sort of thing." (Pharm10)

"They are really open and happy to talk to me. They'll approach me if they need to, or email or message or whatever to find me." (Pharm02)

"Because they know that there's another clinical body in the service that probably knows these patients, ... even like when we do HMRs and we do case conferences, most of them go, 'oh geez, these patients are really complex'. Again, this doctor said to me 'You know this is great. You've done a medication management plan.'" (Pharm02)

There were initial barriers for many of the pharmacists, however, with many GPs not understanding the scope or purpose of the non-dispensing pharmacists' role (and differentiating them from community pharmacists), and the value of clinical activities such as HMRs. In these circumstances, the pharmacists would usually take the initiative to approach the GPs and provide education on the purpose, logistics, and benefits of HMRs and other pharmacist-initiated activities.

"The full time GP... he's [a] relatively new GP and he's actually new to the area. We've had a couple of meetings with him. Initially he didn't even know what is a HMR, like what exactly could be involved with them. He was trying to refer some patients to me but he kind of really didn't have a really good understanding of when to refer patients to me or what I could exactly help with." (Pharm05)

"Now that I've been here for a while they properly understand what I can do and...they know I'm not going to talk to them or mention something unless it's actually worth mentioning and I'm not trying to second guess them. And if I suggest something it's for a reason and therefore I believe I've got their support because ... 90-95 percent of the time, they do what I've suggested and if they don't, then we had a good chat about it and I understand why" (Pharm12)

There were also some barriers relating to time limitations and lengthy processes that affected the pharmacist's ability to interact with patients while they were still in the clinic.

"I worked with the GP because ... most people needed changes [made] to Webster Pak or recommendations for changes. I would actually then discuss those in person with the GP. But by the time those came into play and ... there had to be counselling on them [and] I'd be long gone" (Pharm22)

"Yeah so it's hard to have one on one or face to face communication with the GP. Us not being there with the GPs, ... we tried for a bit... We tried just sitting in the waiting room of the GP clinic because that was the only spot we could get because there was limited workspace. That said I think we're realizing now that that it's something that they need to work on, and we are a valuable resource to their services." (Pharm14)

Finally, whilst the IPAC pharmacists reported most doctors were supportive of them and utilised their knowledge, older GPs and locum GPs were sometimes less likely to utilise the pharmacists. This was thought to be due to a poorer understanding of the scope of practice of the pharmacists and being used to performing their role without the input of other health professionals, as well as feeling like they were being 'policed'.

"One of our other doctors who's been here a long time...she's been a challenge. She has a whole stream of chronic disease patients, so perfect patients for us and so you know working with her and then trying to remind her that we're here and she has said that it's something that she has to change her practice because it's not what she normally does. I think she's quite set in her ways." (Pharm21)

"They feel that there's someone there trying to police their work and it's not that at all. It's about providing another avenue to improve the patient's health. ...but it's never personal. It's not that they don't like me. ... they possibly just don't like pharmacists." (Pharm02)

"The locum GPs we tried to educate them on the project but some of them were old school and didn't quite get what our role was as a pharmacist, you know HMRs. The locums are a bit on and off. I guess some of them just do not understand what our role is. Then by the time we get to them, they're just about to leave." (Pharm14)

"Probably older as in age or been practicing for a while Whereas the younger ones seem to come and ask me more questions." (Pharm13)

Aboriginal Health Workers and Nurses

As well as having support from most GPs, other staff within these health services were generally quite accepting of pharmacists and utilised their knowledge to improve the outcomes of patients within the service. They provided support to pharmacists in a range of ways, including not only administrative and background advice on the service and its patients, but also cultural and language support, and acting as a source of referrals (especially when GPs were not referring at the commencement of the project).

"I had a huge support from everyone in the Aboriginal service where it was from the manager to all Aboriginal workers there. So, I really enjoyed my time there. And we worked really hard together and to just make it as successful as possible." (Pharm05)

"The Aboriginal Health Workers and health professionals have been really key there, because language is really important and we are that much more isolated." (Pharm18)

"In terms of being included in the team, the Aboriginal health practitioners are really helpful and have been great at trying to find me patients." (Pharm10)

Patients within the health service were usually quite comfortable with existing staff, who facilitated interactions with the pharmacists, especially if they were new to the area/service. These support staff also had a better understanding of the local community, and provided information not routinely gathered in a practice, such as living arrangements and family issues.

"The one's that I deal with day to day the same thing, so the nurses are really good at identifying people and dragging me in and have a chat to the people or dragging them up here, or they are regularly coming and pick my brains too if they've got something they are not sure about." (Pharm12)

"There were big changes in the way that Aboriginal Health Workers were screening, asking questions, coming to me. Aboriginal Health Worker's coming to me saying 'I figured out that such and such is living with such and such. I think that's where the tablets might disappear...' ... Just really the sort of skills that I think that I have was starting to rub off on other people and they were coming back to me and saying 'I think I figured this out'." (Pharm23)

"I liaised with the Aboriginal Health Workers which was essential if you're just going out to visit people in the homes that we got along well and the HMRs that I attended were well received by the Aboriginal community. Then I felt that we had significant contributions to make to their health care and their medications." (Pharm09)

They also provided advice on how to better integrate into the community, such as seeing elders, and ensuring that patients attended clinic visits, and were engaged during HMRs. Overall, they were considered to be a key part of the IPAC project, and general success of the health services.

"They encouraged me to go to the elders' group when I first started. So that was probably the best thing, because by going to the elders, if they accept you, they will spread the news and gossip like there's no tomorrow. So, I think being encouraged to go to that and going with me to introduce me to those key people. Definitely helps that situation to get into the community." (Pharm04)

"So, we have two Aboriginal health workers and one of them always comes out with me on her medication reviews. So, it's quite useful in that sense because she kind of knows about the family structure and what's likely to be happening with that person. So, she's good at getting hold of the patients." (Pharm06)

External Providers and Community Pharmacy

The IPAC pharmacists commonly served as a liaison between the health service and surrounding health providers, including hospitals and their clinical units, and community pharmacists. Issues that were commonly addressed within the non-dispensing pharmacist role when liaising between these groups included transition care and medication reconciliation, and subsequent activities such as HMRs and DAAs. IPAC pharmacists were quite descriptive of these interactions and found that they were appreciated for serving as a liaison, and felt they were having a significant positive impact on patient outcomes.

"There's been a lot of work that I've been doing with probably the core roles of transitional care between discharges from hospital and coming back into community and also probably with the renal unit is probably a really big one as well. We've been trying to improve the communication between the renal unit and [health service]. They have medication changes really regularly and, in the past, [health service] has been bypassed in that step for medication changes and they've gone straight to the community pharmacy which makes it tricky when the clients come to [health service] for general GP services and they have, their medication list has not been reconciled." (Pharm19)

"So the renal nurses have probably been the ones that I have liaised with most...The hospital pharmacy were quite happy to send me like any discharges of patients from [community] and then they call me if they have anything specific they need to chase up on or if a patients left without their medications and we need to try and get them to them. There's been major pack changes that we needed to organize urgently they would ring me as well. So, I've liaised with them through email and phone quite frequently and I'm due to go see them next week to work on the liaison plan" (Pharm10)

There were, however, some communication issues that were encountered with some external staff, particularly within the hospital system. These were generally due to pre-existing tension or ineffective communication methods that had persisted for some time.

"There's a lot of history and I didn't know about it. A lot of problems between the hospital and here and sharing of information, but I get on like a house on fire with the pharmacist there [hospital] so, I just ring her. The doctors therefore use me to use that relationship." (Pharm02)

"I've asked for him to notify me ... through the medication changes when people are discharged and that just hasn't happened. So, for him, he sees potentially as me complicating an issue that he's got sorted because he sends the things to the local pharmacy and they sort that out themselves. So, he kind of doesn't really necessarily see me adding value." (Pharm16)

Overall, pharmacists described several successful aspects of their communication with other health providers, and changes that were adopted as a result of their role within the health service.

"I think really, probably the biggest change would be the communication between the different, different areas looking after that client like the hospital, the renal team especially. We've built up a really good rapport with the renal team and that's been commented on numerous times. We got an email recently from one of the doctors who was just so happy because he's been there for 20 years or something and he said you know this is the first time this has worked." (Pharm17)

"I've spent a lot of time with the doctors showing that when they're prescribing and checking the patients list, the clients list of medication. So, they're changing strengths [of medications] but not removing the old strengths off the current medication list. So, when we've got other clinicians coming in, the referral letters are getting sent off and the medication list isn't correct or accurate by any means. So, I've spent a lot of time with the doctors trying to change that and increase their understanding of the whole process. So, I guess [that's] the biggest thing." (Pharm04)

"We can fix things straight away because what has happened historically particularly with the HMR model is things get flagged and identified but then there's a lag between me being able to actually sit and talk to the doctor about these issues and share the additional pieces of information. Because I write very short reports because that's what the doctor's like." (Pharm01)

"I'm thinking that GPs are communicating a little better with the pharmacy and definitely with the hospital. I think that communication line has opened up and there's some pharmacies now who have a better ability to contact a doctor when they want something." (Pharm11)

3.1.6 Cultural Competence

Most IPAC pharmacists felt they understood the local people and their culture. However, those who had worked in the community prior or who had had many years' experiences in Aboriginal and/or Torres Strait Islander Health felt they had little understanding of the local community compared to those who were new to the ACCHS sector. The complexity of Aboriginal culture was appreciated:

"Oh my God, it's so goddamn complex. ... it's one of those things that for them, they grow up with it ... When you grow up with it, it doesn't seem complex at all to them." (Pharm08)

"No. No I don't. I have a lot more than I did and the more you know, the more you realize you don't know. ... Now I know that there's things that I do know, but there's still a lot more that I don't know." (Pharm23)

Pharmacists also felt that the cultural awareness training provided through the IPAC project either introduced them to new learning or reinforced their prior knowledge. Most also had access to local cultural induction. Few pharmacists were allocated a formal cultural mentor; but most felt they could seek out information to supplement what they had learnt at cultural orientation with a local staff member, including AHPs. Some of those who chose not have a cultural mentor believed that having a formal cultural mentor would have been beneficial.

Furthermore, there were vast differences between cultural requirements in remote areas to urban areas. In urban areas the pharmacists identified the impact of the stolen generation, and the community may comprise of different cultural groups due to colonisation:

"I was told by a GP that [the health service] had the 'stolen generation'; I found many community members did not appear or report to have cultural awareness themselves and stated they were not concerned about it." (Pham09)

Most pharmacists felt that they had been welcomed into the community. Examples given about how they were welcome was because patients were happy to see them. However other pharmacists also cited that evidence they were welcome was due to invitations to local cultural events. In remote areas two pharmacists had been given names in the local Aboriginal language:

"I've been adopted. So, one of the women at [community] gave that [name] to me which was lovely." (Pharm08)

"...actually they gave me a name two days ago". (Pharm24)

At another few services the community had given the pharmacist other 'endearing' or identifying names:

"I'm kind of a bit known as you know they call me ... that 'bony Migaloo medicine lady'. So that's my nickname here. And it's said, you know, with love I believe." (Pharm01)

"So, he [CEO] started to call me just 'medicine woman' and he's made it a bit of a joke but then everyone in the yarning group just knows, ah yeah [IPAC pharmacist's] the 'medicine woman.'" (Pharm11)

"I'm the 'medicine lady' and they know that I'm looking at their medicines and trying to help them with their medication." (Pharm19)

Most pharmacists understood the value of participating in cultural and community events outside of their role:

"I go out of my way to try and be part of the community so I come to all the cultural events whenever I can, I'll bring my family across, chat with people about what's going on in their lives. Ask questions about local cultures and customs and really try and understand and I think that over the years that definitely helped. But it comes from a genuine place, I genuinely want to help and want to feel part of it, and I think probably people can tell that so that's been that's been really good." (Pharm01)

However, one IPAC Pharmacist felt that they did not understand that this was part of their role; and this was not made explicit to them:

"And after speaking with the Director of Health Services, my understanding was that she wanted greater commitment from me in terms of attending community meetings and functions outside of my allocated work hours which I was already stretched, and I wasn't able to because of my own pre-existing commitments. ... I think that might have been important to [the Director of Health Services] in terms of cultural awareness and involvement in the community but to me, from my perspective on

that, which I understood from PSA, that [level of involvement] was outside what the allocated time was and not a requirement of my role. I think that's probably the main issue.” (Pharm09).

3.1.7 Relationships with Patients

There were mixed responses from pharmacists as to whether all patients understood the role of the pharmacist. There was some confusion depending on what the prior role had been in the service or the community. For example, if the pharmacist had worked in the community pharmacy patients could be confused about why the pharmacist was at the health service. Sometimes pharmacists were mistaken for doctors. Furthermore, as explained by one pharmacist, the public, patients, and even other health professionals, had a misunderstanding of the role of pharmacists; that was beyond the stereotypical role of being in a pharmacy behind a counter. However, if communities had been exposed to a non-dispensing pharmacist or HMRs previously, there was more understanding of the IPAC role; even in very remote areas:

“... it's funny because I thought coming here, I was going to get inundated with 'ok where's my medicines' like the dispensing pharmacist. I've had hardly any problems ... because I think they have in the past had an HMR pharmacist come through so [they are] used to having a pharmacist here providing medication reviews. They still have to go to the pharmacy [for medicines].” (Pharm02).

An effective strategy used by some pharmacists was to explain their role to patients at the first meeting:

“I guess it was ... back to basic understanding that they don't really understand. But once I explained that I'm actually paid to just look at the medication, the doctors are only with you for 10-15 minutes they don't have time to do everything.... And I think once they sat down and I explained all that ... they would then say they understood. Then it just took a while for it to get across.” (Pharm04)

“As part of my intro, I explain that I've got two roles and its patient focused, like ‘are your medicines working for you, can I help with anything’ And then there's a GP focus to update things and I can't change anything. So, I have now asked them to ask at the GP appointment about what the pharmacist has talked about. So that's [my role] really to just to get those recommendations seen and actioned. I thought that that was another way for them to get that done. And then I see that I get good feedback from them at the follow-up. So, I think they are fairly clear on how it works and my scope. Yeah, I think they do understand.” (Pharm16)

Patients began to understand role as project progressed and those who had more contact with the pharmacist grew to understand the role:

“But I think the longer I was there and the more comfortable I got with the role the more that they understood it. ... [I'm] starting to see those repeat clients that we had them coming in asking for us now. They just turn up with their, just to see us if they've had medication changes or whatever. So that's great.” (Pharm17)

While most pharmacists noted that it was easy for patients to come and see them; with other staff helping organise appointments and multiple ways of following up; people not attending appointments was an issue cited by most pharmacists across all settings. However, patients who ‘did not attend’ (DNA) was common for various clinic staff, not just for pharmacists.

“I found that booking appointments ahead of time didn't work well, with a number of people not attending these pre-booked appointments.” (Pharm15)

“I think one day I had like five booked in and not one turned up. But it happens in the allied health as well, so ... I book them in on the day they come in for allied health thinking that's a good day to get them and they just don't turn up for anything.” (Pharm17)

"No Aboriginal place that I've been to... The appointment system doesn't work particularly well."
(Pharm23)

Despite pharmacists accepting that DNAs were to be expected, people not attending did impact on their ability to undertake their role;

"That's the thing. A bit of an issue especially with the recall and the HMRs. ... I think one day I had five booked in one day and not one turned up. But it happens in the allied health as well, so ... I book them in on the day they [are] coming in for allied health thinking that's a good day to get them and they just don't turn up for anything." (Pharm17)

Another reason for DNA cited by some pharmacists was the number of appointments that patients had to attend, particularly renal patients.

While building rapport depended on the patients, most pharmacists reported that trusting relationships with patients took time to develop, from three weeks to three to four months. One pharmacist felt that she was continuing to build rapport.

"Probably a couple of months but then after that, now that they see me here, and they see me involved they're quite accepting of it." (Pharm3)

One pharmacist demonstrated how their relationship had developed with patients through how patients had become more honest in their responses to their questions:

"Well I think there are ... a few of them have been actually repeat clients and have actually come back afterwards and said 'well actually I know I told you before but I'm not actually taking that' or 'you know I haven't used my puffer for six months really'. So, they've become more honest during repeat visits, they've opened up and said 'well I admitted that the first time...' So it was just building up a bit of trust." (Pharm17)

Other strategies to build trust and rapport used by the pharmacist including being involved in other groups such as women's groups and elders' groups; as well as community events.

The majority of pharmacists highlighted that having good communication skills were essential to be able to undertake the IPAC role and being able to communicate effectively with patients. Having cross-cultural communication skills and experience were important in remote, rural and urban settings:

"To be honest I think you know your clinical skills are very, very important no question. But I think that your communication skills are far and away more important. The way you can explain things to people, the way you listen, your storytelling... you've got to tread very delicately in the way that you do that, if you're trying to create behaviour change and create and maintain relationships."
(Pharm01)

"... being able to communicate with people sometimes who can't read and write and haven't been to school ..." (Pharm04)

An ability to adapt their communication and education styles to the different patients was also important. Pharmacists in urban and rural areas in particular noted that there was a diversity of patient experience:

"Some patients are really, really good at communicating how they feel and really comfortable in a one on one situation. Others are just a bit timid and they say what they think you want to hear. That's like with anywhere." (Pharm14)

"... you just, individualize it for who you're talking to ... there was a vast difference in clients, on how we could speak. ... some you can talk to like I'm talking to you, others not so much and then the ones that are really from remote [areas], it was quite basic. But I don't feel like there were any, that I felt I wasn't able to communicate with them at all." (Pharm17)

"It just depends on the patient. So, we have a sort of a broad demographic of Indigenous people, some who are very mainstream and others who are not.... Most of them will understand what they need to take their tablets, but not why they have to take them all the time or things like that. So, I mean they're pretty happy to talk about it. They know the rules. I haven't had many not want to discuss anything." (Pharm03)

Pharmacists gave examples of how they used cross cultural skills to communicate effectively with patients about their medications. This pharmacist was working in a very remote area with people who did not have English as their first language:

"... a lot of the times in my consults with patients it's been going back to the core principles of what their condition is and trying to explain that to them. Certainly, pictures work better than anything else. And then trying to tie those things back into their life and why it's important to try and prevent some of these things from getting worse and that the medicines are the things doing it. So I think whilst in some other areas a large portion of your time might be explaining the ins and outs of each medication with the [people], you know I've been satisfied if we've just managed to get through what their actual condition is and how these medicines might actually help their condition." (Pharm10)

"I draw pictures ... I assess their knowledge base. I assess how they are going to learn the easiest. I do all those things. But still it takes more than one or two or six times." (Pharm23)

The most common strategy used by pharmacists to ensure that patients understood information was to ask questions or to ask patients to repeat back information about their medications:

"I regularly ask them to repeat it back to me and do it that way so they can try and think of it rather than just getting lectured about their medication. I like to think 'well let's try and do it that way' instead of me giving all of the information that I think is necessary." (Pharm04)

Information given to patients also had to be practical and meaningful to them. Clearly outlining what medications were for and why patients had to take these medications was an effective strategy:

"I just ask them questions. ... because you don't want to just talk to someone. But [questions] like 'do you know what this one [medication]... is for? Did the doctor tell you what this is for? Do you know how it works and if it is a blood pressure tablet, how has your blood pressure been?' or 'I don't know' and then you know we'll check that. Or 'how has your sugar been?' And also recommend to them, this is how often I think you should be getting that checked... I always try and get back to the actual reason [why] they're taking it." (Pharm07)

However, the level of understanding of patients depended on health literacy and their English language skills; particularly in more remote areas:

"Generally ... I had to have someone who they agreed could interpret for them. So, I may have missed some things along the way. It's once removed by the time there's a general interpreter. But I couldn't see any other way of getting any useful information at all at that point. Only because ... I try not to go past what they can understand. If they can only understand one thing. If I pick up one tablet and say 'sugar' and they all seem to understand sugar. If they are vague at that ... I don't go beyond that. There's no point in overloading someone with information when they've got such basic or virtually nil health literacy. You have to go a step at a time at their pace and ... I try not to overdo it over. Because if I overwhelm people they're just going to be overwhelmed and not want to see me ever again. But

if I can just get one or two quick little things across, messages as well as getting information I'm looking for. If the English was a bit better, I probably go through the whole Webster Pak with them. But at that stage I would only say some things for sugar or it's for... your heart or whatever and then my idea was to come back later once we got those basics out of the way and then enlarge on it at later visits" (Pharm22)

While a few pharmacists found that patients did not openly discuss their medications or have much understanding; most found that as they built rapport and developed relationships, patients became more open to discussions.

"They will give you the answers that they think is the right answer and I found that it [takes] a lot of digging around and asking maybe five or six different ways of one question to get ... the actual correct answer, and not what they think they want you to hear. I think that's the hardest thing and the most time consuming. Apart from that I guess a lot of our clients [with] a lot of medication do get Webster Paks. So, when you ask them about the medication, they have no idea. They're just taking it because it's in there, they know what colours and what sizes and how many and that's about it." (Pharm04)

Some patients were very open to admitting that they did not take their medications and were honest with the pharmacists:

"It's quite funny there was one young girl, and she just said 'I haven't taken my medication I haven't taken any of it' and was like, 'No, oh I'm not going to lie or pretend that I did take it', she was quite open." (Pharm06)

"I haven't had any trouble with that, and they seem to answer honestly and as I said at the end of this, as I say to them when I start, I'm not judging you ... at the end of the day, if you're not going to take it." (Pharm12)

Pharmacists gave examples of how patients better understood and discussed their medications. These included patients picking up changes to medications or changes to how medications looked.

"One day one patient he said, 'Where is my Ramipril it's not in my sachet?' ... So, Ramipril is usually white and the capsule is ... blue and white and maybe we ran out of stock and our pharmacy they put in the tablet which is the orange one. So, [a patient] came and told me 'where is my Ramipril? It's not in here.' But it was there, it was different colour ... I couldn't believe he knew that. And [patients] want to know ... what is each one of their medications and what they do to them." (Pharm24)

Pharmacists gave examples of patients who would book in to specifically discuss their medication changes, particularly after being discharged from hospital:

"I'm now getting a few, and it's not many but it's enough, that are booking to see me after every change has happened to their medicine. So, it's not often but they will book in and say okay they've changed this, what do you reckon or those types of things so that works relatively well, I think." (Pharm16).

Often patients mentioned that other health professionals had not previously taken the time to explain their medications; therefore, they had not had the forum or opportunity to discuss medications.

"I find that most people are actually very interested. They were very hungry for information particularly information that's delivered in a way that's digestible and relatable. So, I've spent a lot of time over the years trying to really refine my storytelling around different things to make sure that it's meaningful and relevant and understandable but still technically correct." (Pharm01)

The patient survey (N-MARS) enabled some patients to talk more freely about their medications in a structured way. The N-MARS tool is discussed in more detail later in the report.

3.1.8 Changes as a result of the IPAC role

IPAC pharmacists cited four categories of changes as a result of their role: changes at the health system level; changes at the service level; changes for other health staff and changes for individual patients.

Health-system and services changes

At the health system level there was improved communication between hospitals and pharmacists. This had led to improved discharge summaries and medical reconciliations.

"I think probably we've managed to achieve better medicine reconciliation in terms... of the collecting of information from the hospital pharmacy, liaising with the local pharmacy and probably in a timely manner [for] those changes actually happening. So, I think a lot of the times the process before would be that a discharge summary might come through and it would get scanned into a person's notes and then it wasn't really until it was flagged to be looked at that people would look at it and then that process would be started. But I got [the hospital pharmacy] early on to send me the discharge summaries for [name of service] so I generally tried to sort of start that process a bit sooner. Whenever I see a discharge summary, I'd reconcile the medications and see if there are any changes and try to catch the doctor if there was anything that needed to be sorted out. So, I think that process is probably with the pharmacist on board has probably been more timely in terms of what the patient eventually gets." (Pharm10).

"The only other thing that changed probably is that even the hospital now will actually directly contact me whenever they discharge anybody that is, especially if they are concerned about the medication so rather than just ... sending an email and saying Mrs X has just been discharged, here's the new medication list. And we'll try and chase them up and at least have a chat to them or sometimes I'll print it out and give it to the doc, so I know they've seen it before it is scanned into the system. The hospital's actually much more proactive in contacting us now directly rather than before when they would only talk to the pharmacies." (Pharm12)

"I think really, probably the biggest change would be the communication between the different areas looking after that client like the hospital, the renal team especially. We've built up a really good rapport with the renal team and that's been commented on numerous times. We got an email recently from one of the doctors who was just so happy because he's been there for 20 years or something and he said you know this is the first time this has worked. The patients are discharged, medication changes, pharmacy, doctor, everyone [is] aware and new packs given. So that's changed." (Pharm17)

At one service the IPAC pharmacist used communication and collaboration with pharmacy networks to resolve issues.

"Relationship with the hospital, relationship with community pharmacies, we've put a lot of effort into that too into you know like letting, promoting that we are there, utilize us we can help you. With ... the renal clinic at the hospital and also the nurse navigators at the hospital. We've become part of that team and we've been dealing more with the nurse navigators that works at the [name of health and hospital district] as well which has been fantastic. For those remote [patients] we can actually find out what they are taking, which has been difficult for the doctors up there. They really envy the pharmacy network. You know we had one fellow when I was at the homeless hub and he ..., had no idea what he was taking, his sister's bought him in and said he needs his tablets and the doctor's sitting there going 'well where do I even start'. So, the health worker came out to me. He said, 'oh can you see what you can do' and this was, at the time sitting on the footpath in front of the [Homeless Hub] and within 15 minutes, oh not even 15 minutes, 10 minutes I had a sheet of his packs that were

packed in his Webster's up in... And the doctor was just like 'how do you do that?' And you know we've got the pharmacy network. So, they're very jealous of that pharmacy network." (Pharm17)

Improved relationships and changes between community pharmacists and the health service was also cited as a change which resulted in improved communication and continuity of care for patients:

"I'm thinking that GPs are communicating a little better with the pharmacy and definitely with the hospital. I think that a communication line has opened up and there's some pharmacies now who have a better ability to contact a doctor when they want something. So before they used to send faxes which go to some central faxes and would get lost in Neverland, whereas now they can email the doctor direct and the doctors have agreed [that it's] okay for the pharmacies to contact them so they will email direct, cc the pharmacist, so we if we know someone's on leave then we can get someone else to action it or tell them this is why it's not happening. And the hospital is now doing that as well so today oh just this week. This has been crazy but patients who the hospital have directed to [name of service] to get CTG scripts; anyone who is discharged will get a little summary even if they're not even on our books, that they've been told to come to [name of service] to get their CTG scripts and help get organized with Centrelink cards or whatever that all comes through. So, I think the communication between those groups has improved immensely." (Pharm11)

"I think mainly the continuity of care has improved by having the community pharmacy a bit more involved in the clinical decision making. Because there's two different GP clinics in the area and I guess ... the patients don't understand that we don't ... share information through their computer systems. So, the pharmacy became the middleman who had all the current information and by being part of this project and being in the services we were able to expand our role and help through continuity of care and ... making sure that the clinics knew what [medications] the patients were on." (Pharm14)

Pharmacists also discussed policy or procedural changes at the services, including education. One pharmacist had previously undertaken HMRs for service patients and noticed the changes with following up those patients:

"I think being here for IPAC has definitely improved our ability to instigate the changes that [we] identify through med reviews whether they be HMRs or non-HMRs and get that process happening quicker. Being able to do follow up, I think, has been really good because, through the follow up process, I'm able to see when things haven't happened, whereas before those people [were] lost for sometimes up to a year or more before actually they crossed my path again for another reason." (Pharm02).

Other pharmacists noted changes to systems or procedures that they had helped develop or stream line:

"...between me and the managers we're just trying to streamline a lot of things. We've definitely stopped a lot of overprescribing. We're trying to reduce the amount the pharmacy is unnecessarily dispensing and those type of things to try and fix the process and a lot more communication. It's weird because there have been a lot of changes since I've been here, so I'd hate to say that it's all because of me but if you like the services is always a new thing changing around here. So, I guess it's a bit hard to work it out, but we've just tried to make processes in the sense it does matter who walks in that it's the same process and it's not different for each staff and it doesn't get changed. So basic things like handing out spacers to clients all has to be documented correctly so we know what's coming and going out and, so one client ended up with six of them by the end of the year, so basic things like that that were being avoided." (Pharm04).

Often the changes introduced were simple work procedures, however they made a big impact on patient care:

"...when I come here oh, I would say you know with the sachets. It was a mix up. Oh my God their medication didn't match with their charts and all of that. checking the chart thing that makes a big difference now for the nurse because they're not allowed to give the sachets without checking in the charts and they get very frustrated that sometimes ... no medications were there [in the charts] ... I arrange all the sachets in alphabetical order for [the doctors] so they can find this and they can make the orders much easier to use for them for the manager. Managers are very, very happy with that." (Pharm24).

Staff changes

For other health professional staff, there were changes in their understanding of medications, facilitated through education by the pharmacist. Education took place either through formal sessions with all interested staff or through "on the job" individual interactions. Pharmacists had modelled patient-centred care, not only education about medications, but about talking to patients and having patients at the centre of their own care:

"...inviting the patient to be the team leader and putting them in my chair and inviting them to read their files. So, it's about empowerment there isn't it. That I'm very, very willing all the time to change seats. And you mentioned that other health staff are starting to do that now. I see them trying to involve the patient much more. So, for example there was a culture of screeners not telling patients their blood pressure and blood sugars and things. That had to change, didn't it? So, we started little on things like that and then you know more and more I invite patients when Aboriginal health workers are in here to read the correspondence that comes from the specialist with me. 'So come on, pull up here, now see where he says this, do you understand what that's about. Can we, can we talk about this'. So, the more I'm talking to you the more I realize that I'm being much more of a teacher here than a pharmacist." (Pharm23).

"I think the main thing from organizational level is just having an understanding that medicines are an important component of holistic health care and giving them the appreciation that ... We need to keep up with relevant guidelines for them and we need to make sure that people are taking the medicines that they need to be taking and not taking medicines that they don't need to be taking. Making sure that the patient is involved in that process. I think for a really long time the doctors or any clinician has been making decisions on behalf of the patient without the patient being at the centre of that decision-making process and that means that they don't know what their medication is for." (Pharm19).

"The input into clinical discussions about patients. So that's an area where they've [health service staff] ever had pharmacist input before. So, the feedback from the staff has been that it's been quite helpful to have someone there to think about that side of things. And my biggest sort of take-home message to all of them has been along the lines of we can do the best prescribing in the world and the best diagnostics but if the person doesn't actually go home and take their medicine then we haven't actually completed that loop. So, I think I've just been trying to drill that into everyone's head." (Pharm10).

With improved education, health professionals had a better understanding of medications and their prescribing role and were able to enact changes for patients.

"Medication management ... being more aware, for example, of drug interactions, adverse effects and just prescribing information, education to help Aboriginal Health Workers, nursing staff, medical staff." (Pharm09)

Patient changes

Similarly, pharmacists reported that for patients, there was a change and also an improved understanding of their medications and their conditions. Patients were better equipped to talk about their medications with other health professionals and to identify issues:

"We've improved the amount of people taking their tablets. We've improved compliance. The staff have a much better understanding of what pharmacists can do and how they can get involved. What we can offer. Probably the biggest thing is just taking their tablets more." (Pharm03)

"I definitely have more people understanding what their medicines are, being able to talk about them, understanding what the actual name of the drugs is as opposed to the brand names. Knowing how to look for problems themselves which is something I place a lot of importance on when I speak with people in the community is that they are essentially the last line of defence against any sort of mistake or problem and that they, if they are aware of what they should be taking and what everything's for, and why, then they can pick up on something that's not right and let us know before we pick up on it... (Pharm02)

Pharmacists reported that patients also felt better as a result of medication changes and were experiencing better health outcomes:

"I think patients probably had a better understanding of their medications and in terms of adherence and simplifying regimens and identifying adverse effects. Patients receiving correct doses, more appropriate medications, reported feeling better – less adverse effects." (Pharm09)

"We have one client that had a HbA1C of 14 and ... her glucose readings were in the 30s and we as a team, nurses and myself [sic] and one of the doctors, we've talked to her about medication and the importance of it and how it needs to be used. So, we've got her coming in every Tuesday to have her Bydureon injection so that's been over the last three months and we've finally got a HbA1C down to 8 which we would like to get it to 7. So, we are doing random glucoses of around 7 and ... you can just tell she's so happy in herself and that she understands what her medication is doing and how important it is now that she can see actual figures of things and she's losing weight and she's just so right. They're the clients that you're seeing and yes, a success!" (Pharm04)

"We've had certainly quite a lot of clients ... there's been huge improvements in their biomarkers. Have we captured them within the timeline of the project? I'm thinking maybe a couple of them we have, but there's quite a lot of others that maybe the changes were already starting to happen and this has just been flow on from that as well." (Pharm02)

Some pharmacists also cited changes to chronic disease management as a result of their role:

"Like most of HMRs that I've done there were issues ... there were some big issues. ... So, the things that I probably recommended or commented on would have made a difference to the chronic disease management for that particular patient." (Pharm05).

A few pharmacists felt like there had been no changes or felt they had felt little impact. This was due to either workforce issues or the short time period that they had been in their IPAC role:

"I wouldn't say much [change]. I wouldn't say that I was very influential, mainly because of the having locum GPs and me working two days, there was not much collaboration happening in the clinic between me and other staff or between me and GP. So, I think I think it would be very successful if there was a regular GP. And [the GP] knows very well the benefit of a pharmacist there and if there was a pharmacist working full time then that will be different completely different scenario." (Pharm08).

Holistic approach

Pharmacists also described how they took a holistic approach to patient care, appreciating that patients needed to be involved in changes to their medications to help improve adherence. Listening to patients, understanding their lives and experiences and adapting regimes to suit their own needs, were all strategies that pharmacists enacted to help improve adherence. These techniques and strategies were often contrasted with the strategies used by GP and other health staff that did not address compliance.

"Well there was one [patient] that hasn't come back actually, and he was taking medication in the morning and in the evening. And he was quite a special case actually because at the time he was homeless. Anyway, so it took us quite a while to track him down and actually get him to come and see me and actually go to through all his medication with me. And what I explained to him was that because he wasn't on that much medication anyway, he could just take all his medication in the evening. He seemed quite happy with the idea that he could take all of [his medications] at once though and then it would be done in one go. And I'm hoping that's what he's doing." (Pharm06)

"I had a lady who saw a male doctor. She didn't want to see male doctor but there wasn't a female there. She went in she said 'I got swallowing difficulties. These [unknown] tablets are so big I've been crushing them.' Something got missed in translation and he put her on a slow release tablet that couldn't be crushed. So, then she goes home, and she knows she can't crush [the tablet] because it says swallow whole. So, I went and did a HMR on her and she was just so upset. But ... I got her in for a follow up and she felt I think more supported knowing that there was someone there who actually went, 'oh yeah that's pretty shit, let's fix that.' You know listened to her. You know we're listening to our patients." (Pharm02)

"Look I think I have seen that [change]. The way that it manifests sometimes is in a negotiation process. I mentioned earlier [I am] often trying to advocate for the clients. So, I'll try and make it as easy for them as possible. So, one of my goals, and I'll quite openly say this to everyone, ... is trying to get you on the absolute least amount of drugs possible to keep you well. So, in doing that ... I'm ruthless when I go through and I'm like where's the indications for that, why is this person on it, what's the risk benefit for that particular drug in that particular person. I'll go through that quite vigorously and try and tie that in with my discussion with the patient, what's important for them, where their priorities sit, what they're able to manage, what they're willing to manage and we kind of go through a bit of a process and that's where I've found the most buy-in. That's why I think I've seen the biggest changes because of wins. I'll give you a renal patient as an example, they've got this Webster Pak that rattles when they walk and they're slightly terrified to look at it when they pick it up and it's overwhelming and to be completely honest, and I'll say this to them as well, 'I'd be frightened if this was my Webster Pak too' and they'll be like 'yeah, I'm not quite sure what to do and I don't know if I really want to take them' ... and then you get to the conversation. So ... if we can reduce the drugs down to a less amount, even things like the way we negotiate around phosphate binders, even just visually changing the fact that we have them in a separate container that they then use as their after dinner mints as opposed to them looking like a medication per se. That whole sickness that people get, it's very overwhelming and very burdensome. And then I can make them not feel as much like they're really unwell and then they will actually start to take them. And I've witnessed that time and time again. But I think that's where I see the big wins. The small wins are in people where they've not been taking something. Well they stop taking everything because one of the drugs is making them sick. So, we get to the bottom of what, which one that is. We fix the problem. I reiterate to them that this is not you, this is the medicine. You and this medicine are not friends. We need to find a medicine that's going to be nicer to you. And you know there's plenty to choose from. We need to make this a bit of a bit of a two-way street. You need to tell us how you're going so we can fix the problem because there's been a history of people you know not coming forth with that information for a variety of reasons. So that's something that I'm very kind of open and honest about and say 'look if the medicines we're making me sick I wouldn't be taking them either, I don't blame you. How can we fix this?' And we kind of open that dialogue and that often creates an increasing concordance with medicines as well." (Pharm01)

"I found that by really kind of empathizing with people's situation ... you're a mum with six kids at home running wild and your meant to take your drugs three times a day, it isn't going to happen. So, you need to go 'okay well how can we make this workable. What are your priorities? We need to make sure we focus on your priorities and then we need to focus on how we keep you well.' And I sell it to people particularly people in caring roles because they're the ones that don't care for themselves most. You know in general society as well, not just here. And when I sell it to them in the context of 'Well look if you're not healthy then the whole system is going to fall down. So, we need to look after you so you can then look after all these other people that are dependent on you'. And when I sell it to them in that way, they're like 'ah'. It's kind of like you see people kind of stop and think for a minute and go 'I didn't think about that. I thought I was being selfish or whatever' insert other cultural thing. And you know this is not something I just see here. This is something I see in [name of town] and I saw in [name of city] and I see everywhere where people put themselves last, particularly in health and I try and really make them re-evaluate that decision and what that might actually mean in the long term. Doesn't always work. But I think it does with a lot of the time." (Pharm01)

"I just think that they feel better equipped or better... There's someone there explaining to them all their medications, why they're taking it, relating it back to their health and so because [of] that they're empowered with knowledge, they feel like there is a reason why I'm taking this. Rather than sitting in a room going 'Ok well we're going to start you on this medication, take one in the morning' and that's the end of the conversation." (Pharm02)

"There's so many patients that we're seeing so ... I would never dream of saying that 100 percent of them are better because there are still some that you think you get on the road and then you ring them the next two weeks and they haven't taken their medicines for a week. So I think there is a group of people who have really found a lot of benefit from what we've been able to teach them and discuss with them and negotiate regimes with them to make their life easier and help them understand, fit their medicines into their life, and sometimes we change BD things to daily with the doctor just because they still take them and then there's still a large percentage that we've probably got lots of years of work to do and lots more contacts if we're able too." (Pharm11)

"So multiple times probably in a day even you'd see a couple of people who you'd have, either changed to something that's slow release all in the morning or even if it's meant to be at night you know getting them to have it in the morning cause at least they take it. And they're happy because they don't feel guilty that I'm not doing what they should not do. ... You say well we can help there's always something we can tweak with and so they feel better once they're not feeling guilty." (Pharm11)

"One of the problems is staff consults saying, 'you've got to take these, you've got to take these, you've got to take these.' And I keep saying 'actually no they don't, they have a choice to take them. It would be best if they did. But if they don't we can't force them to.' As an example, we had one woman who's only mid-30s. She's got three kids, one with a disability. She's a primary caregiver in a house with 20 people. She was on metformin XR, gliclazide XR, some anti hypertensives, around about six or seven medications, [and she] couldn't swallow any of them. So, she was crushing them. Funnily enough, huge bolus doses of slow release medication and vomiting and [she] just didn't take them. You can see on their results the HbA1cs are up at 15s They're not compliant. So, I start with 'these must be awful to take,' kind of thing. And then we go from there. She was a big victory because we cut all her tablets out, put her on dulaglutide and ... her BSLs went from 24 to 12 in a week. So that was a big victory. Then she got a urinary tract infection, but we swapped her back over to the bidureon for the exenatide. But you know that makes life much easier for her. And prior to that she kept saying to them 'I'm taking it. I'm taking it and I'm using the insulin every day.' And they kept saying 'well you must, you must' not hang on what is it you don't like about it." (Pharm18)

Involving family members to assist with adherence and frankly discussing the patients' conditions and test results was another strategy discussed by one pharmacist:

"I was actually showing ... one of the GPs here and he has been living in this community for a long, long time. He knows everybody very well. So, I said look at this patient today how much the sugar levels have been decreasing since the time [the patient] has talked to me. And [the GP] said 'I can't believe you made him change his mind'. what's happened is I involved the wife. The wife was in there in the same room and I talked to her. And I said 'listen you make him remember it's very important [for him to take his medication] because [he has] already had a heart attack already. It can happen again'. And, I think she took [it] very serious. And I said to him 'really I want you to come back in two weeks.' So [he came back in] two weeks and [his] sugar was normal again. Well it was nine and the blood pressure was settling down too. They come back to me 'look at these, look at the difference between when you were taking [them] and when you're not taking'. Yeah it works, showing [the patient] their results is very important." (Pharm24)

Adherence

Most pharmacists believed that patients had become more adherent or compliant with their medications as a result of their role. Some pharmacists attributed improved adherence as the most positive outcome of their position:

"We've improved the amount of people taking their tablets. We've improved compliance. The staff have a much better understanding of what pharmacists can do and how they can get involved. What we can offer. Probably the biggest thing is just [patients] taking their tablets more." (Pharm03)

"A patient that had just been labelled non-compliant and never takes their medicines and multiple records in Communicare of that. And when I sat down and spoke to them we realized that they actually physically couldn't take their medicines because they'd had a stroke and it impacted on their ability to use the hands and they couldn't actually get them out of the pack. So, through that process I'd liaised with aged care to have their medicines done through there and now they're getting access to their medicines every day and actually physically being able to take them." (Pharm10).

Pharmacists at some services noted that non-adherence was expected and that little had been done in the past to address this issue with patients or across the service:

"I'm doing more follow through than most people are because I'm trying to find these people and find out how they are going. As soon as you can figure out that compliance is the issue and you have a talk to them about it, then you've got to follow that up. Don't just let it go." (Pharm18)

Patient education was attributed to improving adherence:

"So, the biggest thing is that they think 'I'm taking my tablets today. I don't really need to take them tomorrow.' So, explaining, why they have to be taken every day. That's how [medications] work. Why they need to work. A lot of people here on dialysis so everybody knows what that is and talking about that, and if you don't take your tablets, that's where you might end up. But then another big thing is that they won't take methadone with food. So, it's finding that you don't always have to have food, it's better ... just misconceptions and misunderstandings about medications that they may have had that I can clarify." (Pharm03)

"I know certainly there's one lady who at the very start of the project when I saw her she was flatly refusing to take all of her medication because there were way too many of them. We sat down with the prescriber and we set out the plan for just a few tablets that she could take to try and get her back on track with compliance and certainly when I followed up with her further down the track she does seem to be doing a better job of taking them. I mean at the time she had osteomyelitis and was requiring frequent trips to [town] for debridement and there were discussions around whether or not she would need an amputation of her toes and things. We seem to have managed to get her through this phase where she had to take all these extra antibiotics and out the other side and the other day

I ran into her and she's walking down the street doing some exercise. I feel like perhaps we've made some improvements since she's gone from being sitting around hardly being able to walk on this leg to actually being out on the street walking, so that feels like a positive impact.” (Pharm10)

The IPAC pharmacists believed compliance or adherence had also improved due to patient education and improved understanding. Some patients had never had staff take the time to explain their medications:

“I'm hoping that the compliance is better because the patients understand the medication better and those that need Webster's have actually got Webster's but it's not as simple as just buying of a Webster is it, it's getting them to actually take it from the Webster Pak. Yeah. So, it's a matter of me going through everything with them again and again.” (Pharm06)

“I know that [education has] improved because you know I've had more than one person say to me at the end of it [explaining medications] ... 'Oh no one's ever explained it to me like that before. I understand now'. And they'll take it. You know I've had that said to me in more or less those exact words more than once.” (Pharm17)

Furthermore, pharmacists also outlined how changing medications or simplifying medication regimes had improved adherence. Through changing medications that had adverse side effects; changing combinations or types of medications or changes drugs so that patients could take them at different times.

“There was a lady who we visited who was on a cocktail of antipsychotic medications and she was experiencing a lot of adverse effects and interactions and we were able to simplify her medications and she felt a lot better.” (Pharm09)

“You know I feel like people have been pretty honest with that stuff when they say I don't want to take night time meds, I can't remember. Cool. Let's see if we can make them all once daily. Cool. Actually, we can. Great, people like that, total wins for compliance I reckon. We've managed to rejig it and get it once daily, so you know you don't know that stuff if you don't fossick around. GPs do not have time to do all of this. Like how are [GPs] going to fit that into a consult. This is what's it's great having a pharmacist here because we can sit down we can actually do the tablets one by one and I prompt for that [with questions] 'How many days in the last week have you taken this medication?'. I guess I added a lot of prompts to that [N-MARS] like 'What about the night-time ones?'” (Pharm20)

“And one of the things we do a lot of is just making sure the GPs are looking out for, which is the subject of my DUR I suppose, was using combined medications to cut down the medication load. We've gone through most the Webster Paks, a lot of them just trimmed down the number of tablets that people are taking to combined tablets. That's been a real focus and people like that.” (Pharm12)

Webster Paks or blister packs, sachets and other DAAs also assisted with adherence; particularly for patients who travelled. Pharmacists ascertained what type of DAA would best suit the lifestyle and needs of patients:

“So, the people that I have suggested that should go on to sachets were two people ... One was a really busy person who just would forget to take their stuff away with them or found it ... cumbersome to put four boxes of something into their bags so would often leave them behind. So, I think for that person having them in the sachet and just being able to take six days of sachets with them and sticking that in a bag should help to improve compliance. And for the other one it was a lady who was busy in the mornings and would ... have time to take a couple of tablets but not all of them. So certainly, having them all together and just being able to tear it open and take it hopefully will be helpful for her. I think because the understanding and the language is so hard out here that if they weren't packed into sachets or medicos a lot of people would just take even less medication than what they currently are. I do think it helps with compliance.” (Pharm10)

"I spoke to a man who he was very non-compliant. He wasn't on blister packs. He had bottles at home. No one knew what he had. His blood pressure had consistently been 200 over 100. ... I spoke to him and we started him on a blister pack, got all the bottles out of the house and yet his compliance went from like who knows, to very good and his blood pressure went from 200 over 100 right straight down to 130 on 80 like perfect. And yeah, he was compliant." (Pharm07)

We've got another interesting lady who she was all over the place actually because she had a Webster Pak but she was actually chopping the Webster Paks up into little bits and pieces because she reckoned it was easier and then not necessarily taking it all the time and it was a real mess. We sat and chatted to her [and arranged for her to get sachets] And she's actually taking them regularly now because the sachets are like what she was doing with the Webster Pak anyway and she could see the tablets in there nice and easy and so she was taking her tablets regularly now." (Pharm12)

Two pharmacists felt that there had been no changes to compliance. One pharmacist noted the difficulty of influencing compliance; however, had worked with other staff to make this a team priority:

"I don't know, that's still a hard one. I think we've got a couple that are just completely non-adherent and it doesn't matter what you do. We've tried working with a couple of the ITC [Integrated Team Care] workers when they're going to check on clients, to say 'well have you taken your medication?', cause obviously it's impossible to call them every day and ask, 'have you taken your medication today?' So [I say to the staff] 'look let's just check on them'. Are they taking the meds if we're going there for another reason just ask them while we're there to make sure that everything is on track. So, adherence is always going to be an issue, unfortunately." (Pharm04)

Another pharmacist also noted, that while they had noticed changes with adherence in some patients, it was difficult to follow up patients over a short project period:

"I don't know. It's really hard so I've been trying to catch a lot of the patients that I saw earlier in the project recently to see how they're going with the changes that we made and I haven't managed to follow up with a lot of them." (Pharm10)

While some pharmacists used a more direct and frank approach to adherence:

"I haven't had any trouble with that and they seem to answer honestly and as I said at the end of this, as I say to them when I start, 'I'm not judging you but at the end of the day, if you're not going to take it, ... I'd rather know so that we can stop your packs so we are not buying packs if we don't need to. So, I'm not here to judge you I'm just here to help you'." (Pharm12)

Other pharmacists believed that a "softer", slower approach was required:

"It's just I think there had been black and white and not necessarily grey, you know you need to take your medication. That kind of stuff whereas I think you sometimes need to be a bit more softly, softly approach." (Pharm13)

Medication review impacts

All pharmacists but one reported making prescribing or other recommendations to the GPs after completing a medication appropriateness index (MAI) audit, HMR or non-HMR. Just under half of the pharmacists said they made recommendations for "most" or the majority of patients and five (5) said "all" (or 100%) of patients were flagged for recommendation. A couple of pharmacists described frequency temporally as "daily" (Pharm02) or "probably once a week" (Pharm03).

"Pretty much always there's something. Now sometimes it's major and it might be major but... we've got great doctors here. ... a lot of people I see, the medicine's lists don't match. So, there's often

something that needs correction. And that may be because they're managed by cardiac or renal or somewhere else or they've got multiple GPs ... So, then there's people that are on prescribed medicines that they haven't taken [them] for however long because they don't have that condition anymore. For example, PPIs [proton-pump inhibitors] or they shouldn't be taking the medicines because, for example, they were put on aspirin back when the guidelines recommended everyone with diabetes to be on aspirin which has since changed obviously. And there's other kinds of leftover things that aren't always questioned. So, I would say nine in 10 people there is a recommendation to make, sometimes they're quite serious, I'd bring the client in with me ... let's fix this right now. Sometimes they're just minor tidying up, kind of what I call my administration thing. But yet if they were left undone, they have potential to cause problems downstream.” (Pharm01)

“A lot of them, just little tweaks here and there. A lot of them with the changes in the [medication] for asthma, changes there.” (Pharm17)

Five pharmacists discussed the process of how they made recommendations but did not discuss the frequency or how often they made changes. There was no response to these questions from the pharmacist who provided a written response to the interview questions.

While most pharmacists discussed prescribing recommendations, pharmacists were also involved in providing education, health promotion and referrals to other allied health services:

“75 percent of the time maybe. Other times it was just, a lifestyle, it's supportive, or access, getting them access to allied health because you broached it and I've finally said 'Yes well I will go to exercise sciences' and facilitating that. I'd say maybe 75 where there's been can we change this, can we tweak this, this way or this person has this symptom can you think about adding in a drug for this.” (Pharm11)

Prescribing suggestions were made in a variety of ways. Often pharmacists used two or more ways to communicate their prescribing or management recommendations. How suggestions were made often depended on the preference of the prescriber or the service's systems.

Approximately half of the pharmacists noted that face to face discussions, where they would “knock on the door” and speak about changes directly with GPs, were effective ways of communicating changes. This method was used by pharmacists who were physically close to the GPs.

“That's the beauty about being in health services, you're physically there so you bump into the GPs and staff in the corridor and it's one to one, it's perfect. You've got all the resources at your fingertips and all the information and the patient is there so your level of intervention is way higher than anywhere else. (i.e. compared to being offsite or somewhere that's remote or distant). You're at the point of prescribing so it's essential that's really where you have to be. That was me working in in that health service. ...You just walk past the GPs door and if the doors open you go in and discuss it with them.” (Pharm09)

“One of the things I've been doing lately, especially in the mornings, is when I come in have a look in the appointment book and just have a look at who's coming in and, if it's a name I might have seen pops up, I have a look at their medications. I had one yesterday. She was actually one of the targets for a HMR but I could never tie her down, so I saw that in the appointment book and I actually went and saw the doctor before he saw her, and ...I said 'look if we change these two to this one, these two to this one, she'll only be on two tablets rather than five. What do you reckon?' And then when [the

GP] saw her, he changed it over. I don't have any problem going up to any of the docs it and just saying 'Hey listen what do you think about that?'" (Pharm12)

"So, what I'm doing now. I'm writing my medication review as the report and then, when I'm in [name of clinic] for example, I take it to the doctor very quickly. ... I say, 'look at this, what I find' ... he said 'OK we'll do the changes now'. And then I said 'ok'. The change is done because they can see my work." (Pharm24)

If a face to face discussion was not practical, pharmacists emailed GPs or messaged them through the CIS:

"... the doctors rotate through the different clinics. So, if the doctor is in that clinic that I am in that day I'll just go and have a chat to them. Otherwise I'll just email or message them through the prescribing program" (Pharm03).

Face to face interactions were especially useful when there was an urgent change:

"So, after I do my review, I just write my report up and give it to the Aboriginal worker or to whoever is responsible there for uploading such reports to the system through the clinical software. If there were any urgent matters I would just quickly ...approach the doctor and just speak to him about it. If a matter can be attended to the next visit which could be in a few days, then I'd just write it in the report." (Pharm05)

"So certainly, just being present and being in the clinic [I could discuss] the verbal changes. So, if you just see something that you think should be actioned straightaway and the doctors are very, very happy with that... Other processes with discharges are they get uploaded to the GP inboxes in the medical software and I find out which doctors that they're getting allocated to and approach them directly because [the GPs] get a lot of inbox things and medication changes are sometimes missed. So just to have my finger on the pulse to make sure that these changes happen, if the GP agrees with them ..." (Pharm19)

Verbal discussions were undertaken with locums who did not have access to an ACCHS email:

"I communicate it through the system and then I speak to the GP directly because having locum GPs there is no emails so, usually I recorded it on the clinical system and then I have a print out and go and speak to the GP if they are available. If not, I leave it to the end of the day until they're available and speak to them." (Pharm08)

Even when changes were put in the CIS or in a report, it was still useful to speak about changes directly with the GPs to further explain the pharmacists' recommendations:

"Lots of face to face with messaging through Best Practice [CIS], I'll just shoot them a message and ... attach a specific patient and I'll just say 'oh hey you got this patient coming in, in half an hour. This is what I thought can you check'." (Pharm02)

"A lot of notes in the clinical information system in each client's folder and then a lot of the time hanging out in the hallways waiting for the doctor to be free five minutes and just jumping on him to chat about different things. I find when they do have a meeting it's usually quite overwhelming and there's a lot of information getting thrown around. So, I find it's sometimes easier to grab a doctor individually to gauge understanding, all of our doctors are international. So, sitting in a meeting is usually quite challenging." (Pharm04)

"When I write in here [Best Practice], luckily it comes up in big capital letters and so the doctors are supposed to go back to my last visit and always read the notes but you know what, often I'll knock on their door and go, 'I see you're about to see [Name of patient] can you read my notes. Good.' Or I send BP message, or I put big things that flash up on their screen." (Pharm23)

However, one pharmacist noted that sometimes changes were discussed verbally through the provision of medicines information, without a formal medication review being undertaken:

"So sometimes the doctors come to see me and we've had a chat about a patient and she's asked for just suggestions about things and then I just talk verbally with her and then she goes off to do it. But I don't always go and make a note in Communicare if I haven't had to actually assess the patient, if she's just come to me with 'these are the medications the person's on'" (Pharm10)

Another pharmacist preferred to put the recommended changes in the CIS for the GP to consider when they had the patients file and details in front of them:

"... if I see them there in the corridor you know we can discuss it then. But I've found that that's not the best way for me because the head's not on that client so it I prefer to send them that email and say 'Can you look at this and think it needs to be looked at'. And then they can open the client's file and get their head right before they read." (Pharm17).

Case conferences or team meetings were the preferred way to recommend changes for three pharmacists. They felt that this was more effective than sending reports that were not often read by GPs. Case conferencing was also a form of joint decision making where the doctor and pharmacist could discuss their decisions and the logic behind the changes:

"I have set up with one of the doctors ... times for case conferencing and that's been really handy for just getting my recommendations actioned pretty much because ... just sending reports is no good... It's interesting because my expertise is very clinical and I'm very used to giving doctors feedback, but I don't think the GPs are always open to it.... I try and case conference with people because sending reports in their [work] flow just doesn't happen. And then you have to pull back on all your recommendations and some of these a page is not enough of recommendations." (Pharm16)

Two of the three pharmacists provided a written report as well as participating in case conferences:

"In theory we try and have case conferences every week. So, our [work] flow is to try and see clients, anyone that needs discussion which is most of them. Sometimes I'll send intra-mail and then things will just get followed up that way by whoever is relevant and fixed. Sometimes or, if there's a little bit more to it, I try and case conference and have a chat with the GP for every person where this is relevant. So certainly, anyone that's had an HMR or non-HMR that process will probably happen. So technically what we try and do is have a case conference period blocked off with whoever the chronic disease GP is for that week and either [Indigenous Health Worker name] or [the] health worker [that] has been working with me and myself sitting with a doctor and we pull up the clients one at a time that I saw that day or the week before and run through. Because I try and keep my notes nice and brief to make it easier for the rest of the team." (Pharm01)

"I'm a member of the case conference and tele-meds with the specialists. ... And two weeks before the conference I prepare myself I take everything from these patients, and I write a report and so I'm

ready for the conference and the doctor sometimes I have time with them, and they rely on me now to do that.” (Pharm24)

One pharmacist mentioned that they wanted to start case conferences as the GPs were interested in using this form of communication (Pharm14).

Six pharmacists made recommendations through report templates on the CIS or by uploading them into the CIS. There was no standard way to do reports, with pharmacists following the requirements of the CIS or of the template they used.

“I write a report that gets uploaded and then we notify them. That's the kind of system that the medical director wanted but specific changes I also put in the notes as well.” (Pharm13).

“So, if I've done a home medication review then I give them a copy of it or even if it's a non-home medication review. If it is a review, then I still pass on all the information to them in written form... and that goes into Best Practice and then they respond and that response comes back to me and in Best Practice as well.” (Pharm06).

“Well we do HMRs, we've done a few HMRs and we do reports, so an HMR report that we sent to the GPs.” (Pharm14)

“I do two things. I give the doctor a printed copy and I upload it into Communicare... into the progress notes. If it was uploaded as a separate document [it would] get lost.” (Pharm18).

“So usually when I do a med review I've been doing an actual formal report up and then emailing it to the doctor and then ... I've been uploading them into the files when they've been done I do try to leave the clinic, you know when I've seen the patient about what they've told me in terms of their compliance, so I try to put that in initially in my initial consult with them and then drew up the report and sent it to the doctor.” (Pharm10)

While many pharmacists also communicated through email as well as the CIS (particularly for urgent actions) only one pharmacist found email to be the preferred form of communication:

“Email is the preferred method I think that we've found, and I've talked to the doctors about that too and that seems to be their preferred method.” (Pharm17)

A few pharmacists reported suggestions to prescribing or changes in the CIS. A couple of these pharmacists (Pharm20 and Pharm21) worked at the same service.

“So, we put everything in Communicare under the clinical item and then when we've got any recommendations, we do a recall for a medication review and we list the recommendations in the recall. So, it sits there in the 'to do' list. So that's flagged to the GP in the system. So, it's there and it's got a due date. So next time they are in there is the theory is that all the 'to do' items that can be done are checked off. [It] doesn't always happen but that's the theory.” (Pharm21)

Two pharmacists who worked at the same service developed their own report format with their ACCHS CIS officer. This was useful as many reports they had previously sent through were not read or actioned by GPs. It was also useful as the GPs did not have to print them out:

"[Name of Pharmacist] and I had always used a similar HMR report format before we started, and we realized that a lot of the reports that we'd sent through never ever got seen by a doctor. We found a pile of them in a tray one day, way back from years ago. So, we knew that we needed a different system. And so, we worked with [name] up in Communicare to make a template of our report and medication management plan which he's put in for us and we ran it past the doctors and so it's a working document for a little while and now that's how we do it." (Pharm11)

Pharmacists outlined how they used multiple ways of communicating findings and recommendations. They adapted the way they communicated these according to the preferences of the GPs and the service.

"I write very short reports because that's what the doctor's like. So that's how I've modified my practice over the years. Very short. I write straight in the clinical notes now because I used to have an attachment, but they found that was difficult and it got missed sometimes. So, actually writing the clinical notes like any other visiting service and then it doesn't get missed as much and we have intramail and all those different systems that we try and utilise to make sure that things don't fall through the gaps." (Pharm01)

Another two pharmacists had asked doctors what they wanted and developed reports outside of the CIS. These reports were then emailed to reception to upload to the patient files; then it triggered a recall for the doctor. If it was urgent the report was emailed directly to the doctor.

"We do the report, but we do it as a Google document. It's just a report between us and the doctors. We sat down with the doctors at the start to...ask them what they wanted us to do. And that is what they wanted us to do. I think it is because they get lots of locums through as well." (Pharm07)

One pharmacist noted that they needed more guidance on how to communicate findings and recommendations:

"I think that's an area too that... I found sort of hard in terms of the project. I guess maybe clearer guidelines around what to document in the notes what to put in a report, that sort of thing." (Pharm10)

The majority of the pharmacists (n=20) felt that their recommendations were **taken on** by "most" GPs or that their recommendations were "usually" taken on board. Four pharmacists responded with a "guesstimate" percentage.

"So most of them agree, around 60 to 70 percent. When I review a patient and this is what I've said to them, I review everything I try and do it holistically. Sometimes pharmacists get so caught up on drug-drug interactions things like that and they don't look at things simply. ... I try to do it holistically, but I try and do a good review of everything. And then I say to the doctor 'let's pick one or two things when they come in, then in six weeks' time we can do another two things'." (Pharm02)

"In terms of the actual reviews then obviously I think the GPs have been quite receptive to any suggestions that I've made ... they have not just dismissed them or anything." (Pharm06)

"And they're really receptive to the changes. Occasionally it it'll be 'yes let's try it'. And then next month it didn't work. We're going to try this instead. But we haven't had any huge objections or 'no don't be ridiculous that's a silly idea.'" (Pharm11)

Some pharmacists noted that the readiness to take up suggestions depended on the GP, with some highlighting that some GPs were more accepting than others. Three pharmacists mentioned a GP at their respective health services that did not take up any of their suggestions.

"Most GPs I think would take on most of them. There is one GP I don't think has done any of my recommendations." (Pharm21)

One pharmacist that worked in two of the services' clinics noted that it depended on the prescriber or clinic:

"I think I don't know maybe 60 or 70 percent of the time. Ok so in [name of clinic] zero percent of the time and I'm reconsidering going back there at all. But [in this clinic] ... maybe 90 percent of the time at least one thing I've recommended will be actioned. Maybe half the time, all of that will be done, but that's generous maybe. ...And I don't think it's a personal thing. I think [that GP's] ... will do bare minimum, [that's] the vibe is within the service." (Pharm16).

"I think everyone I think everyone. One doctor at the start was a little bit resistant ...I found out that here, if another doctor did the change, she didn't want to interfere in that. She said she will sit on the fence and ... didn't want to move from there." (Pharm24)

Two pharmacists felt that most of the recommendations were taken on board, but they could not be certain as they did not always get feedback from the prescribers:

"I think of it like the doctors would have to do that but not all the times I've actually got feedback I don't know actually what happens. But the times that I got the feedback there was the changes that I recommended, they were made." (Pharm05)

"I don't know because it's really hard to follow up with a lot of them when I'm not working all days and then [I've] been away and there's other things going on. It's hard to grab them in the hallway and say you know that report I wrote back for... so, I need to follow up on that. But I think yes they are." (Pharm13).

In addition, one service discontinued the intervention phase of the project before the pharmacist knew if changes had been made.

"There were the nurses, they're really under pressure. And I think that's one of the reasons they [the service] pulled out because I created too much work. I reviewed 20 people each fortnight and then the doctors got 20 [patients] to review from my reviews. And [there is one doctor]. They've got all sorts of other calls on their time. In retrospect I didn't realize at the time ... exactly the time requirement from the service. Even if there's changes in Webster Pak after I've left it's up to the nurses to try and explain that to the patients because they don't get that change before I come back again in six weeks' time. ... I had a really good GP I could go and talk to at any time and discuss things but at the end of the day she had heaps to do and what she didn't get done, unfortunately was what had to happen was she had to leave notes for continuation of that." (Pharm22)

Another pharmacist ascertained recommendations were found to have been accepted due to changes in the patient records:

"I would say it was very, very well received because changes were made in the prescribing history you know to that to the patients' records to the doses that were being prescribed at the time." (Pharm09)

Two pharmacists discussed that whether changes were made depended on the way the recommendations were made; with face to face interactions more effective than reports or notes in the CIS:

"I think probably in just about all of the ones I've done so far, I've suggested a change or an addition or a reducing in dose, so I think and, or most of those have been taken out by our Prescriber. ... She's quite happy to have input from pharmacy and said that she actually finds it quite comforting to know that someone is out there and can spend more time looking at the ins and outs of the medication for each patient where her role doesn't always allow that time. I feel like she's been quite accepting of the suggestions I've made. She hasn't accepted all of them obviously. So, a large portion of compliance issues out here I think are around metformin and its side effects and I'd like to try and say that we should cease it altogether, whereas she sometimes compromises and just reduces the dose. So yes, it's a working, in a working relationship." (Pharm10)

"If I directly talk to them about it, it would be like 100 percent of the time. If I know that they have understood what I've written down and ... they've taken on all of them. It's the ones where I've made recommendations but I'm not sure if they've seen it or if they don't agree... I haven't had that sort of feedback like 'Oh I didn't think that that was appropriate.'" (Pharm19)

There were five actions that GPs took once they had received prescribing or other recommendations from the pharmacists: they recalled the patient; they made an appointment for the patient or they opportunistically saw the patient. Furthermore, if suggestions were made while the patient was with the GP, changes were made to medications straight away. GPs also contacted pharmacies directly to update medications.

Six pharmacists noted that GPs recalled patients. In addition, two pharmacists highlighted that GPs updated medications without seeing patients.

"..they will try to then get that client in, within the next week depending on how urgent the changes are that need to happen. And then I will come in and see the GP and they will have those changes instigated and new Webster Pak made or medicines dispensed or whatever needs to happen depending on the situation." (Pharm01)

"They will either recall them in and see them, or they'll just update the chart and send it to the pharmacy." (Pharm03)

Pharmacists outlined how they used the CIS to ensure that actions were undertaken and the next steps:

"And we've also been putting on a recall a month after we've submitted the report to check that the HMRs been claimed, that the patients come back and MMP is all in the file. Then we change that recall to the three month one to do our three-month post HMR review." (Pharm11).

"So, we'll check it a few weeks later to see if they have seen it. If they've uploaded it. If they've claimed. If I need to claim and then we'll chase that up with the doctor if I need to do that. But generally, we'll see that they'll send the report back to the pharmacy once they have done the management plan and then we ... we use the defend system to record. So, we'll put HMR recommendation from pharmacists and then you'll get back from the doctor the report and then there'll be another history note [with] a change. 'Stopped this, started this something else'. So that's how we've been tracking it. And I think it is working." (Pharm07)

"If I haven't heard anything from the prescriber within a week or so of me sending the reports, I generally just try to catch her in the hall and ask if she caught the email, so it hasn't been a specific formal process yet." (Pharm10)

Some GPs relied on the pharmacist to recall patients:

"They really rely on that having someone else [to do it] ... which I'm [going to do] ... because at the end of the day if it gets the patient where they need to be [it's good]." (Pharm02)

Four pharmacists stated that GPs followed up opportunistically when patients were next at the service. This was due to the number of patients who generally did not attend scheduled appointments. However, following up opportunistically was only done if the change was not urgent:

"I am guessing I probably don't even look at the report until the patient is next in. I mean if it was something urgent I would go on approach the doctor but most of it's not like it's about PPI use or something else." (Pharm13)

"A lot of it is opportunistically because of clients coming in and no shows." (Pharm04)

"So basically, once I've done the review, then when the patient comes in again and they do discuss that with you, with the patient and then they take whatever action needed. The only issues that I've got a few patients who just might not come back after the review." (Pharm06)

Two pharmacists noted that GPs would have an appointment booked with the patient. One pharmacist noted that this was more effective than putting them on a recall list:

"So, they don't do recalls because they have too many recalls and they said they will never see them. So, once we have done the report and we send it to that email. We then or say let [Indigenous Health Worker] and reception know that we've done that. And then if they can book in the patient for the appointment with the doctor. Otherwise ... they've already got recalls that they can't even get to. So, if we've done the report, we make sure that they book the appointment." (Pharm07)

Six pharmacists discussed how they had to use a range of strategies to ensure the patient would come and see the GP to discuss changes:

"They would follow them up opportunistically too because there were a number of those patients that have regular bookings. I recall patients would also make follow-up appointments themselves post HMR." (Pharm09)

"Well they try and recall but the recall system is not great. So, I guess a mixture of both. It's opportunistic. But we try, when we send the report to the GP, we also send a template email to the admin staff to try and get them to make a booking for that patient to see the GPs [to] get the medication review that we did." (Pharm14).

Actions undertaken were also dependent on the GP and on what was required:

"So, [it] depends on the GP. So, some of the GPs like to see them and it also depends on the recommendation as well. ... to claim the item 900 also they need to see and discuss with the client as well. So, we've been booking clients in for the review and then they come back ... that's when the recommendations get done. Otherwise we here ... there's a duty doctor so sometimes when you've

got the client in the room and there's something that can be changed straight away you can just go and grab the duty doctor and then they can come in and change it change straight away if it's something that needs to be changed ... it's been a process to try and find the most effective process.” (Pharm21)

If the doctor was with the patient or the patient saw the doctor after the pharmacist, or if suggestions were made verbally, changes could be made straight away:

“The doctors now will come and bring them to us and say I've made these changes, and made that change, they're [going to] start this and going to do that so we look after them then and there, so [a] big, big difference as far as the clients are concerned. And that's been a big change.” (Pharm17)

3.1.9 Induction

General Project Induction

All IPAC pharmacists reported participating in a general project induction program facilitated by the PSA. For the majority of pharmacists this was delivered over two days in a group setting in a central location (a capital city). For a small number of pharmacists, the project induction was delivered individually either in a central location or at their service, due to their start date being later, after the majority of pharmacists commenced. Content included details about the project, the ten core roles and cultural awareness training. Pharmacists were positive in their feedback about the induction training and felt they were prepared: *“It was good to have all the 10 aspects of the role explained and how it was to work. And it's good to have the cultural training as well because coming directly to [service] I wasn't really that aware of Aboriginal culture and all the history and everything. Yes, that was very useful”* (Pharm06).

However, it was recognised early that there was a lot of work to be done in the project and the amount of information was quite overwhelming:

“There was a lot of information especially with the core roles. It's like whoa! Where do I start with this and yeah, then just trying to get my head around the data entry that we get with what each role involved in terms of data entry that was a bit confusing” (Pharm14).

“It was great. I still was a little bit lost in some places at the end because the clinics are all different. So, it's probably just like an overarching education but even while we were sitting there you know jotting down not both had a page each and we chatted at [the] first lunch about it, you know how we're going to find patients” (Pharm11).

A benefit highlighted by many of the pharmacists who had attended a group session was the opportunity to meet the other pharmacists working in the project. Being able to ‘meet and greet’ allowed for relationships to be developed and peer support to be provided to each other throughout the project. One pharmacist commented: *“and to know, to meet the other people that are in the same roles. So, I used that at the beginning when I wasn't quite sure what I was doing and I knew some of the pharmacists had already been working in services before. So, I was able to give them a call and question things and make sure I was doing what was right. And sometimes it's easy to talk to someone of the same level as you than asking the people who employed you. Am I doing this right type of thing, to bounce ideas off. So, I found that really good, the meet and greet.”* (Pharm04)

General Cultural Training

General cultural training was a part of the general project induction facilitated for the groups of pharmacists and conducted by two external trainers. Feedback on the cultural training was positive. One pharmacist stated: *“The cultural induction especially, was excellent. Even if you had a week it wouldn't be enough, but [the facilitators] gave us enough of an insight to really paint a picture of issues we would likely face and the*

origins of attitudes we may encounter. My overwhelming feeling was sadness that despite growing up in country Victoria, I had never had this education or exposure until 33 years of age.” (Pharm15)

Several pharmacists had participated in cultural programs previously and reported that it was interesting and a good refresher. One pharmacist stated: *“So it was actually quite interesting. I enjoyed it. [It] just built on what I knew. It wasn't new to me maybe it was just interesting getting more consolidation I guess”* (Pharm14). Another commented: *“I felt pretty good. But I think that probably had more to do with my experience with [Aboriginal people] already than the training, with the training and inductions.”* (Pharm03)

For a couple of the pharmacists where the programmed cultural training was not provided due to their late commencement, a day was spent undertaking observation or ‘shadowing’ of an experienced pharmacist working in an Aboriginal Medical Service. This was a beneficial experience for these pharmacists. One stated: *“It was really useful day because I could see exactly how they [pharmacists] were involved.”* (Pharm05)

Some pharmacists also mentioned completing the Royal Australian College of General Practitioners (RACGP) Cultural Awareness Online Modules which supplemented their induction. The cost of the modules was covered by the PSA. A pharmacist noted: *“they also provided me with training like a comprehensive training about the Aboriginal community. Which is a RACGP training. I actually did [the training] over a few days, ... and they paid that for me ... There was a lot of support.”* (Pharm05)

Local ACCHS Induction

Just over half of the pharmacists received a local induction to the ACCHS upon commencement. Of those who did not receive a local induction only one pharmacist identified that they were familiar with the health service already: *“From a clinic induction point of view I didn't really have one, but I think that's because they're like, ‘Oh yeah, you know what you're doing’.”* (Pharm01)

For the rest of the pharmacists who had no local induction one commented:

“I was just like dropped in it. It would have been nice to have a more formal [induction], introduced to everyone and their role and ... even the computer system and all that kind of stuff. I was just kind of left to my own devices because, again, everyone was busy. So that would have just been a bit nicer.” (Pharm13)

When local induction to the ACCHS was provided it ranged from formal programs to informal activities. Activities generally included facility tours, meeting key staff, being set up on the IT systems and workplace, health and safety information.

Local Cultural Training

Just over half of the pharmacists received a local cultural induction upon commencement. The remaining pharmacists stated that they did not receive local cultural training. For some of these pharmacists it was not seen as a priority as they had either been working in the local community and/or had completed a local cultural training course previously. For the other half no local cultural programs were offered, or Aboriginal staff weren't available to do this. One pharmacist commented: *“There was also no cultural induction at all, there was nobody there to culturally induct you.”* (Pharm18)

The majority of those pharmacists who did participate in the local cultural induction indicated it varied from formal programs, visits to important local Aboriginal sites, meetings with elders and designated time with the Aboriginal Health Workers within the health service. A few didn't receive the induction until much later after they had started: *“From memory the cultural awareness was much later, [it] did not occur for several months. The whole health service and I attended a one-day cultural awareness ... that was a full day at [health service].”* (Pharm09)

Another respondent commented:

"Cultural induction had to happen, I had to [say] 'oh I need it'. So, it happened a couple of months after I started. It was great. It just didn't happen straight away. But the Aboriginal Health Workers here are incredible and outstanding and have supported me whenever... and wherever I needed it. Which is great.... It was one of the elders at the [name of community keeping place] ... I was concerned about that because you know throughout [PSA] induction we were so well made aware of all of the barriers and cultural considerations that I was concerned and I felt like I wasn't prepared but then I kind of got here and was well supported by the Aboriginal Health Workers and the community." (Pharm02)

Feedback on the local cultural inductions was generally positive with one pharmacist saying, *"The cultural awareness one was really fantastic. ...We had a [local] guy come and talk to us for a day and it was really interesting because he explained about the family structure and I had absolutely no idea that you could have an uncle who would then take over responsibility for your upbringing. And it was really interesting to see how the links are within the family structure... [The] local one was really impressive. I mean I did enjoy the one in [capital city] and it did sort of set me up to come and work. But the local one was just amazing in comparison."* (Pharm06)

Gaps and Improvements

General Project Induction and General Cultural Training

The IPAC pharmacists identified gaps in the induction training and areas for improvement. For the project induction facilitated by the PSA, the primary area where the pharmacists reported gaps in their knowledge was in the clinical information systems and the logbook.

A quarter of the pharmacists identified that they needed further training in Communicare or Best Practice. Issues were experienced in setting up their user accounts accurately, booking appointments, knowing how to put in recalls and how to run reports. However, one pharmacist noted, *"Communicare is the trickiest but they can't teach us everything about both Communicare, Best Practice and every clinical program that's out there so, we've been lucky we've had [staff] on site and they gave us a little induction on how to use Communicare, go into the test patients... so we can have a play with everything before we attack some poor client's file."* (Pharm11)

A handful of pharmacists would have liked more training in the logbook. There was uncertainty about where to record particular activities, and how to export data and run reports. One pharmacist commented *"I don't think everyone's using the workbook the same way"* (Pharm20). Another pharmacist stated *"I think it's very hard to go through the logbook stuff before you've actually tried to use it... [We] probably needed another session after everyone had been in and had used it a few times. ...So maybe a refresher."* (Pharm21)

A few pharmacists would have liked more information on how it was expected that the role would work on the ground, although recognizing this would be different in different clinics. They also believed there was a gap in knowing the amount of time it might take undertaking the core roles, what their priorities should have been and the expectations in regard to patient follow-ups. Feedback from pharmacists included:

"I guess there was a lot of autonomy in what we were doing which makes sense because all the services are really different. But it also meant that there was not as much structure for the role and what we were trying to achieve I guess they did want [us to] make it our own but that was hard with all the different types of experience that people have already had. So I think there could be more like support there." (Pharm19)

"I don't know so much that they didn't explain the role, I think it was more just that probably they didn't even know until we all got out into the clinic how that role would evolve. They certainly said these are all the things you're going to try and do. And then when you got out there, you're like 'Wow,

I'm going to spend most of my days trying to convince the staff of what a pharmacist does and then the rest of my day trying to convince the staff to try and convince the patient to come and see me." (Pharm10)

Another gap and suggestion for improvement made by a couple of pharmacists was the inclusion of information on how primary health care clinics work and the Medicare billing system. It was reported that some pharmacists had not worked in a clinic environment previously. Pharmacists said:

"The induction was poor if you hadn't worked in clinics before. [Because] I was sort of surprised at some of the things [another pharmacist] was asking and then realized that we know because we've worked in clinics. And I thought that they were poorly addressed. Looking back for [that pharmacist] because I remember in all of the breaks, she was saying 'What's this and what's this and what's this'. [There was] too much subject specific language and that really those inductions should have been divided into two groups." (Pharm23)

"I think in induction it would have been really handy, we did a tiny bit on Medicare billing, but even a section on how the GP clinics work day to day and even stuff that's not got anything to do with pharmacy, just be aware I this is sometimes the usual workflow is this, and these are different ways you might be able to integrate into there. Because I got here and was like OK, they'll be rearing to go and all but I have like get my head around that versus what I had to do. So maybe that would be handy." (Pharm16)

Two pharmacists mentioned they had been appointed a mentor who *"when I need help any time, they will be there for me"* (Pharm24). Several pharmacists noted that the support they received from the PSA Project Coordinators was valuable, *"[PSA Project Coordinators] have been such good support that you can just flick, an email, 'Oh how do I do this? or what did you say about this?' and they'll come back with the answers so they've got all the answers."* (Pharm11)

One pharmacist thought a follow up face-to-face meeting would have been useful to help all partners and pharmacists discuss the various aspects of the project.

"There's lots of communication [that] goes on but I think to get everybody together as a group would have been really valuable and I know in reality that probably would be very difficult because there were people starting [at different times] ... right the way through until virtually December I think that would have been a benefit if there'd been a stage two and I think it would be extremely valuable to get everybody together in a team for JCU, PSA and NACCHO to understand what everybody as a group was feeling because speaking to individuals is fine. But I think sometimes the group will bring out different aspects of it and more." (Pharm22)

Two pharmacists made comments around possible improvements in the general cultural training. One suggestion was *"I think that you needed to involve actual patients..."* to *"help understand where the lack of health literacy is"* (Pharm23). The other suggestion was considering differences in the Aboriginal population living in remote areas. A pharmacist commented: *"It's sort of hard because Indigenous health is different across Australia. I'm quite remote, other places it's a bit different. So, I don't think that they fully grasp the remote Indigenous health concept sometimes, but that only applies to a small portion of the people in the trial."* (Pharm03)

Local ACCHS Induction

A few of the pharmacists made comments relating to improvements for the local induction to the ACCHS. The main suggestion was the need for induction to be coordinated and it was important to include introductions to people in key roles within the health service, *"I think any job that you walk into if you're not introduced to key people right away it's a bit scary."* (Pharm04)

However, this also raised the situation where it was perceived that some ACCHSs were not necessarily ready for the pharmacists, *"I just feel like the site was just a bit...they weren't prepared for the pharmacist"* (Pharm02). Just under half of the pharmacists made comments about the degree of readiness of the health service which presented challenges. Issues included key people weren't at the service when the pharmacist started, staff turnover, space, 'political chaos' and other current priorities such as building new facilities. Pharmacists commented:

"They were really tight for space. They were building a new clinic up the road. They were really tight on time." (Pharm22)

"It was a bad time when I started ... the people who actually knew about the role weren't here that day. There was a sign up for me to come in, work here, so it was all hit and miss. HR didn't know I was coming in. That was scary when you walk into a job that no one knows who you are or what you are doing." (Pharm04)

"I turned up to work and no one knew where I was under... definitely didn't know that I was going to be here. So, there was very little, if not, no understanding of what I was doing except for maybe up at the really high management who had said yes to the project and they had those discussions already in that introduction. So, it was really up to me to sort of introduce [the project] at things like the morning meeting or inservices and that took a long time because of the staff changeovers." (Pharm19)

The majority of health services had no prior experience of the role of a pharmacist within the health service previously and this presented a challenge as the *"role hasn't existed, it's very hard to change the way people work"* (Pharm10). Another pharmacist commented, *"I think they hadn't really been inducted into what to expect from me either. It was a meet and greet I don't know where that miscommunication might have got on board, whether they weren't interested and just happy to give me a room and go for it. Or I don't think it was very clear that, ... they still really don't acknowledge that they have to be an essential part of the success of it. I just can't do by myself, it needs workflow changes."* (Pharm16)

At one location the health service itself had only been established approximately 18 months previously: *"they're still establishing their role in the community. And people are just starting to sort of get used to the idea of what a health centre actually is and what it can do."* (Pharm07)

Recruitment and consent processes

The processes used to recruit and consent patients into the IPAC project varied between the health services. The IPAC pharmacists described different approaches that had varying degrees of success. For a few of the IPAC pharmacists they found it easy to approach patients themselves and sit in the waiting room and talk to the patients there. *"The way you approach them is very important"* (Pharm24). In regards to approaching patients, another pharmacist commented, *"I felt really comfortable, I don't think I had any issues. I tend to be very careful with what I say and what I do. Also, I have a little bit of experience so I know what could be culturally inappropriate. So, ... I tend to be very careful."* (Pharm05)

Another pharmacist described how they approached patients in waiting areas, *"I would usually find somebody I knew and I'd go and sit with them ... and you can see them [others] looking across ..., [I'd say] turn your chair around have a listen because this might be interesting to you too. ... Here's my little speech and then you can say yay or nay."* (Pharm23)

Although feeling uncomfortable, another pharmacist attempted to approach patients: *"I felt very uncomfortable approaching patients but tried to put on a brave face! I don't know how many new/transient faces they've had in the clinic so I didn't know if they just thought I was another 'one of those' which is where an introduction would have been invaluable!"* (Pharm15)

However, a few of the IPAC pharmacists didn't feel comfortable approaching patients *"I don't personally feel comfortable going into the waiting room and asking patients especially if they don't kind of know me"* (Pharm13) and *"that cold, cold approaching people in waiting rooms did not work for me at all"* (Pharm16). Management at two health services made the decision that the IPAC pharmacists *"wouldn't approach people in the waiting room"* (Pharm10) and relied solely on referrals from other members of the primary health care team, *"[Health Service] didn't want us to cold [call] people or just wandering around in the waiting room. That was a real no go zone. So, we haven't been able to do opportunistic pick-ups which I'm fine with, and so [recruiting patients] has to be on referral"* (Pharm20).

Other Recruitment Approaches

Other approaches used to recruit and consent patients included referral from the clinical staff in particular GPs and Aboriginal Health Workers; identification and recall of patients with outlier biomedical readings relevant to the project criteria; and browsing the appointments list for the day and identifying eligible patients. These strategies were implemented at different services. However, referrals were a common strategy used at the majority of services. Comments regarding the success of referrals included:

"Originally the doctors had a list of people and would send me actually a referral type form and that has just kind of died for whatever reason. Because I think there was just too much. So now they send me intramail in Communicare 'hey I want you to see this person' and I'll follow them up. So they'll say 'Oh we've got a pharmacist. Do you want to talk to them about their medicine?' So that at the beginning [this] was working quite well. And then it slowed down a bit and we decided that everyone with the new GPMP [General Practice Management Plan] would have to see the pharmacist as well. And that was heavily reliant on the chronic disease coordinator and the individual health workers to make sure that happened on the day and that was relatively successful but has kind of now slowed down a bit." (Pharm16)

"The GP. You don't get a lot of forms signed, which is fine. But they have a lot of patients that come through and they go 'Oh wow we could really do with a medicine review'. So, then they come over to me and say oh [IPAC pharmacist], have you met Mrs So-and-so. So it's kind of like a referral." (Pharm02)

Some pharmacists noted that some health professionals did not refer patients to them at all:

"Some doctors actually helped me so much. And some doctors they didn't at all, so they refused to refer to me." (Pharm08)

"I think the role of the GP or the readiness of the GP makes a big difference. Yes. That's how I see it. And this is hard because you know doctors change all the time." (Pharm05)

"The staff very, very rarely referred." (Pharm07)

Some pharmacists had more success with referrals from the Aboriginal Health Workers:

"The Aboriginal health worker actually succeeded in referring patients to me." (Pharm08)

"The office that we had was in the same corridor as a health worker so it was just like we were part of a team, [patients] just went from health worker, to the doctor, to the pharmacist." (Pharm17)

Pharmacists also reported that positive working relationships with the Aboriginal Health Workers facilitated word of mouth knowledge about their role through the community and this assisted with recruitment:

"I had meetings with the health workers and I had my champion Aunty [AHW] and there were even members of the community coming into see me going 'oh I was just waiting for you to ask me to be part of this project you are doing' because someone told someone who told someone and then they've

come in to see me ... for a follow up or whatever it was and then they've kind of been waiting." (Pharm01)

"I specifically tried to do some of the older ones [patients] who ...were quite well connected within the community and then ask them 'Hey if you found this helpful and you know anyone who wants to have a yarn just you know tell them to book in with me'. And that worked quite well and now I think they're the biggest advocates. So, I think, [I was] welcomed relatively well but they definitely took the lead off the Aboriginal Health Workers here and once I got their endorsement (and I do), that really, really helped." (Pharm16)

A few pharmacists mentioned that other non-clinical staff also assisted in directing patients to see them including the receptionists and drivers. Pharmacists said:

"A lot of it at the beginning was people not having appointments with doctors, but wanted to ask him a question, so the reception will say 'The doctors are busy, but we've got the pharmacist here. She might be able to help you'. I found, that was really good. So once everyone understood well if it was medication related, I usually answer the questions for them or at least have access to the Communicare and their history that I could find out the answer if it's not easy." (Pharm04)

"There will be patients come in and say 'Oh I haven't got a script for this or for blah' and they can't get into doctor, but [the receptionists] said 'Oh we can book you in with our pharmacist why don't you go'." (Pharm13)

"The driver had, they had somebody come over, which is not unusual, from one of the other communities... for a funeral and [the driver] said 'I brought him in here because they need to see someone and, I know they won't be getting this service over in their community, so I brought him in to see [IPAC pharmacist]'." (Pharm18)

A few of the pharmacists ran reports within Communicare and Best Practice, the clinical information systems (CISs) to identify and then recall patients who met the project criteria or if they had outlier biomedical reading, for example, a high HbA1c reading. Patients were recalled *"by different means SMS messaging, mail and phone calls asking them to come in"* (Pharm08). At one site the IPAC pharmacist enlisted the help of the health services' driver to find and bring the patients in, *"and so I've been able to operate that [the list] at both places which has just been phenomenal, because it means that I can go okay we know this person is in a really bad way., I've given a list to the driver. If he sees any of these [patients he'll] drag them in, and I've since also got the health promotion worker who's Aboriginal or [local tribe] and they go out and collect people for me or if they see people"* (Pharm18).

At one health service the IPAC pharmacists used a combination of strategies and identified eligible patients in the CIS and flagged them; so that when they next presented at the health service the clinical and non-clinical staff would see the flag and could consider referring them to the pharmacists. The pharmacist described this process:

"So in the very beginning [the IPAC pharmacists] would look at the appointment book every morning or the day before ... [In] Communicare you can click on that patient, look at their patient summary to get an idea if there were any medicines that indicated they had one of those chronic disease states or if their health summary indicated that diabetic, heart or kidney problems. We went into bio-graphics and we put 'Potential IPAC client please bring the patient or alert [the IPAC pharmacists] that they're in the clinic'. That was the prompt because that pops up for every patient when the GPs, the health worker or the nurse opens that file that day potentially three people would see that message each time for that one person coming in today and admin would see it too. So that was initially [what we did] until we got to know people" (Pharm11).

A few of the IPAC pharmacists browsed the appointments list for the day and identified patients who might be eligible for the project and then approached them while they were in the waiting room. Potential patients were identified by: *“basically I looked at their medicines lists and if they were taking a few meds”* (Pharm19).

Pharmacists described how this process worked in their services:

“So, we identified patients or go out to the waiting room and chat to people and then usually bring them in to one of the clinic rooms and just go through the explanation of the project. And if they were happy to be a part of it, then [I would] sign them up” (Pharm19).

“In Communicare you will see who is waiting for meds because sometimes they only come to pick up medications and would sit. So, I go instead of waiting and I just call the name if I never met them before” (Pharm24).

Consent Refused

Six pharmacists representing four health services reported noteworthy refusal rates. It was estimated that approximately 20-30 people had refused consent to participate in the project and allow their data to be used after they had received the information sheet and briefing. Another larger health service had higher refusal rates indicating approximately 50-60 patients had refused. The remaining three-quarters of the pharmacists reported very low refusal rates and had five or fewer patients refuse. Several pharmacists did not have any patients refuse.

Perceived reasons for refusal were the patients' *“personal circumstances”, “not being very well”, “mistrust”* of the health service, *“nervousness of the computer, as soon as you mentioned data from the computer”, “didn't want to sign a piece of paper,”* were sick of being *“guinea pigs”, “already had lots of appointments”* or were *“hard to engage anyway”*. Comments from three pharmacists were:

“Some people had too much going on already. So, you already had lots of appointments, [they] didn't want an extra thing that they had to worry about and come back and see us.” (Pharm21)

“In my list I have five that I documented that said no after me explaining the project to them. It's hard to gauge that against the rest of the population because these are a group of people who are hard to engage anyway. So for some of them it was that they didn't want to come back to the clinic anyway, to see anyone, not necessarily that they didn't want to come back to the clinic to see me.” (Pharm10)

“I had one family who were the most educated family in the area, and I couldn't but quietly empathize with them. They said ‘No, we are sick and tired of people like you coming here trying to do your studies and we are just the guinea pigs in this, and we've had enough over the years and we are not consenting.’” (Pharm22)

Local issues and challenges

The IPAC pharmacists identified a range of local issues and challenges that impacted upon recruitment. Issues relating to the health services included staff not understanding and not valuing the role, renovations in the health service and blackouts bringing down the IT systems. There was also staff turnover, staff shortages and locums. Reputation of the health service and a lack of trust were also issues raised by a couple of pharmacists. Comments from pharmacists included:

“Just the communities... what would be the word... how they're feeling about [the health service] at the time. That there's been a lot of disharmony I suppose in the community in regards to the services that [the health service] were providing and how they were providing their service, which is why all of these changes have happened. So, I guess there's generally a lot less people coming in to the clinic. And then when they were here, because they weren't coming as often ... they [staff] were already trying to do everything else. If they have already been here for three hours and then I'm sort of trying

to tack on to the end of that, it was like 'do I have to?' And of course not. So, if there was an option there to leave, then they would definitely take it." (Pharm19)

"I found out that Aboriginal people go everywhere [to lots of different health services] they don't just go to the Aboriginal Health Service ... there was a question why they go to everywhere, if they have a lot of services coming to them in the health service, but there was no answer ... They don't know. It might be because of the locum GPs." (Pharm08)

"The other thing that impacted, and probably still continues to impact to a slight degree ... is the admin staff, they know to keep patients back for the nurse, they know to keep them back for the GP, but once they've seen a GP, if I'm with another patient they just let them go because they don't value pharmacy. The admin probably doesn't know what we do and so I have to literally go out there and badger them every day. And sometimes, at no fault of their own ... I will say to [the GP] 'hey, I'm going to see that patient after you and then the [GP will] forget'." (Pharm02)

Patient-related issues included transience, language barriers, sorry business and being overwhelmed with appointments. Several pharmacists commented that patients moved around a lot including going to their homelands and to visit family. Comments from pharmacists included:

"There was no Aboriginal Health Worker. Nobody in the health service could speak more than a few words of the language." (Pharm22)

"Certainly, out here it's very complex but a lot of the population move in and out between [town] and their homelands. So sometimes they'll be in [town] for a bit and you might catch them, have a bit of a chat to them and hope to try and recruit them. The next time you see them and then they'll disappear off to the homelands for six months and then return a little bit later. So, the moving population has been quite hard. There's been long periods of sorry business and funerals. So out here when that happens the whole community often shuts down ... unless it's an absolute emergency. On those days I think they've probably been the hardest things to navigate in terms of trying to recruit patients and certainly with the population aging, a lot of the people who are passing away whilst I've been out there have been quite significant, elders and that then requires quite long sorry business and mourning periods for them." (Pharm10)

"I get a bit of a vibe that there's appointment fatigue with some of these patients who get referred to every allied health and I'm just another one of those that they have to do. So, I think maybe that's definitely a factor and I actually don't have much success getting people here in the clinic to see me only. I have a lot more success tagging on to GP appointments or other allied health appointments." (Pharm16)

Other issues raised were the complexity of the consent process (considering low health literacy and English not being some patients first language), limited time in remote clinics and the IPAC pharmacist being part time and the effects of needing to prepare for cyclones. A pharmacist noted:

"That [consent] was a nightmare to say the least. There was a lot of information to give to a client. So many of our clients, so many can't read or write. And I guess I just explained it to them in the most basic English that I could, and no one denied it." (Pharm04)

"The time to communicate one on one with people that was difficult to have adequate time because you'd only go to one community, the nurses would stay a day. The nurses would be doing their thing. [As there was] one car and you're going around with them, you just grab those opportunities when you can. But it does limit you. It's none of this appointment system or I'll take this number of hours with somebody and then some hours with somebody else." (Pharm22)

Some pharmacists struggled with recruitment and felt that a lead up period would have helped develop relationships with staff prior to trying to recruit patients. One pharmacist stated *“the recruitment and consent parts been quite laborious. Even with concerted efforts from the staff and myself it hasn't always played out how we like.”* This pharmacist went on to say *“that first part of the project really I felt needed to be longer. I think it felt like it was at least six months before the staff really got used to having you around and started to understand what the pharmacists could do. So, for me personally there was very little recruiting and patients going on in that time. It was really educating all the staff and trying to just chat to people to make them feel comfortable.”* (Pharm10)

Another pharmacist commented, *“we also both [approached] the patients that we already knew. So, if we saw them in the clinic, we went ‘oh you know we're here now on this trial. Would you help us out because it'll help keep us in the clinic, this is what happens.’ So, having that 18 months of already meeting some people helped a great deal to recruit people.”* (Pharm11)

A couple of other pharmacists also mentioned that they knew some patients beforehand which made consent for the project easier.

3.1.10 Feedback on the patient survey (N-MARS)

The patient survey, commonly referred to as ‘N-MARS’ was an eleven question tool used to assess medication adherence-related behaviour for Aboriginal and Torres Strait Islander patients. The majority of the IPAC pharmacists reported that they were the only person to implement the N-MARS patient survey. Of the handful of pharmacists who did have other staff members assist, only a couple did this ongoing throughout the project. One pharmacist *“got in trouble for doing that”* (Pharm02) because it was not seen as a part of the Aboriginal Health Workers’ role. Another pharmacist said *“at the beginning we did a little bit but I found that They were just asking the questions without psych [thinking about it]. It wasn't quite right I guess.”* (Pharm04)

One pharmacist enhanced the skills of their Aboriginal Health Workers to be able to implement the N-MARS patient survey *“at first I did, so I modelled in the beginning and before I handed it right off. So that by the time they were doing it, they'd seen it done two times. So, there was no kind of issue around that. So that worked quite well.”* (Pharm01)

At another health service the pharmacist utilised other staff to assist with language barriers: *“Yeah I did have a couple of the girls in the admin, [they] would come in if I felt like there was some language barriers, or the health worker. But mainly just having someone from the office come in that knew the client and would chat with them more in their language and make sure that they were understood and stay there to help me ask [questions] and they would ask questions in a different way than I would ask questions. So, I did utilise that a lot.”* (Pharm17)

Implementing the patient survey

Nearly half of the pharmacists reported that they had experimented with the delivery of the eleven-question tool and sometimes implemented it like a survey or quiz, and at other times they wove the questions into a conversation. Comments from the pharmacists included:

“So, I try to incorporate it into general conversation. It sometimes is a tick down the questionnaire but other times it's sort of like weaved into conversation just to make it less sort of study-ish.” (Pharm19)

“Once I'd done a few I pretty much knew all the questions. So I would just integrate it into the chat. I found it really easy to use.” (Pharm07)

"I've gotten practice with the N-MARS and I do ask the questions a little differently now to what I did in the beginning rather than to make them understand what I'm saying and remind them there's no right or wrong answer. I'm just trying to see where I can help you" (Pharm17).

"when I first started to use [the patient survey] and I asked people the questions they kind of got a bit snappy and a bit 'judgy', so ... if I said at the beginning look this is a survey, I have to do it for all the clients ... then they were fine with it. And then sometimes I just did it as a chat and as we were generally chatting, I got a lot of the answers. So, then I did it that way." (Pharm04)

Comprehension by Patients

Just over half of the pharmacists reported that the N-MARS patient survey questions were generally easily understood by patients. Pharmacists stated *"I don't think there was any dramas with them. They were really straightforward"* (Pharm07) and *"Yeah, they [patients] found it fairly easy to answer. There were no issues in terms of answering them"* (Pharm06). However, one pharmacist noted some further explanation or clarification may have been required for some of the questions *"It depends on the patient"* (Pharm06).

Other pharmacists didn't feel confident that the patients understood the questions *"sometimes they feel that I'm repeating myself"* (Pharm08) and *"I'll ask the next one, and they're like 'I just answered that'. So, they're not [understanding]...."* (Pharm02). In a couple of the more remote sites the pharmacists stated:

"And I struggled like crazy with the N-MARS questions because you've got somebody with very little English and you're trying to ask them a number of questions that are subtly different...." (Pharm22)

"I did find in this population that the language was hard for some people so it wasn't often that I could just read the question straight as it was on the page and have the person give me an answer. I did have to you know, not prompt, but go this is what it's asking." (Pharm10)

Several pharmacists also mentioned that while the patients may have understood what the questions meant, they wanted to give them the answer that the pharmacist were expecting and not get it wrong. Feedback from the pharmacists included:

"Oh, I think they understood it but that doesn't excuse the fact that they still wanted to get the answer right. Or no they wanted to give you the answer that they thought that you wanted to hear." (Pharm23)

"I try and ask those questions in an informal way but somehow sometimes you just have to be direct to get the answers. But I don't feel like the patient is going to be necessarily honest. I just don't find it that useful." (Pharm13)

One pharmacist mentioned that the survey was giving some patients the wrong messages as they were misunderstanding the intent of the questions. Consequently, time then had to be spent correcting those messages. The pharmacist commented:

"and then just I had to be careful with some of these [page 2] because when you say that to people. Some people would... I can't quite explain it but take it as that's what they were meant to do. So, when you say 'do you sometimes stop taking your medicines because you think you're okay'. They would kind of take that as, maybe because you're not saying what's the wrong or right answer for it. So, you're asking that question and then you're putting an idea in their head that that's maybe what they should be doing. So, some people would take that as what they should be doing and then you'd have to spend a bit of time saying, 'no it's really important that you carry on taking your medicines all the time...' You'd have to make it quite clear after that question what the right answer was so that they didn't think that that's something that they should be doing." (Pharm21)

Changes in Responses

Two-thirds of the pharmacists felt that the patients' responses changed, and they were providing more honest answers at follow-up encounters when their relationship had developed and they had better rapport with the patients. One pharmacist comment that patients had admitted to not telling the truth:

"There's been some where they told me they took them all the first time but when they've come back to see me the next time, [they say] 'I probably wasn't taking them all the time, I just told you that'. Now obviously they feel a bit more comfortable. They're like 'Well actually you know once or twice a week I do have this going on, on these days, and that's why I don't do it'. So, then we try to work through those issues." (Pharm10)

A handful of pharmacists were not able to comment on changes as they had not seen any evidence of changes or had not been in the role for a sufficient amount of time to see patients on more than one occasion. These pharmacists may have resigned and were no longer in the role, or had commenced later.

Feedback on the questions

Half of the pharmacists provided positive and negative feedback on the N-MARS patient survey, the frequency of implementation and the wording of the questions based on their experiences of implementing the tool. One pharmacist said *"The N-MARS was a great tool. Even as an ice breaker to start with"* (Pharm15). A few pharmacists reported it *"It's a bit wordy. There are some questions that ... are a bit funny. Double up with other things,"* (Pharm14) and it *"needs to be more abridged"* (Pharm08). Other pharmacists stated:

"Overall its way too long.... Some of these [questions] are good, and some of these are no good.... But I've liked doing it in that I think it triggers discussion and you pick up little things you might not have picked up otherwise. So overall, I think it's good, there was a compliance aspect to it" (Pharm20).

"I think the theory behind it is good. I think a compliance check is definitely part of the pharmacist role. Whether or not asking a patient those exact questions three times throughout the project is going to make a difference, I'm not sure. I think that the information that you're giving patients in regards to their medicines is more important. For example, me just telling someone you need to take your tablets, that doesn't give them any motivation to take tablets just because I'm telling them. So, we need to find out why aren't they taking them, are they feeling sick, do they not know what they're for, are they at inconvenient times. How can we make the medicines work for them in a way that the medicines still work and do what they need to do?" (Pharm19)

"I really enjoyed it as conversation starters especially in the first consult with the patients. I think they were really important sources of probing questions and things. I don't see as much value and I'm not actually seeing many changes so whether it's a good thing in doing it two or three times ... because you then got a relationship with them and you going back to something kind of formal like this kind of breaks up. I don't know it can break up the flow of the consult a bit and people can get a bit like 'oh you're just quizzing me now'..." (Pharm16)

Feedback on specific questions was provided by some pharmacists.

Q1. Did you forget to take any of your medicines yesterday?

In relation to question 1, three pharmacists provided feedback. Issues related to the local Aboriginal population not understanding the concept of time, the difference between 'forgetting' and 'choosing not to take' medication and including the medication names on the form. Comments were:

"So particularly people found the second question [question 1a] where it asks about how many days in the last week did you take your medication [difficult]. I find for the [Aboriginal people in this area] that's a difficult concept to them. I would have to explain it if I asked it to them they would just look

at me blankly and I'd be well, 'this is saying if there... If for the last seven days' so I'd have to go right back to trying to explain what seven days was, because for some of them that wasn't, they didn't kind of get that out of the question. I'd be like over the last seven days in the week you know it's like Monday was the start of the week, as I'm seeing you on a Monday. Count back over those days. So, for them that was a really hard question to answer." (Pharm10)

"One of the questions is 'did you forget to take your medication'. Some patients actually choose not to take it. It's not forgetting. The reason why it is a good example a lot of people don't take their furosemide when they are going out because they have to go to the toilet a lot. So, they are not then forgetting, they're actually choosing not to [take it] so I think we need to differentiate that a little bit more about the forgetting versus choosing not to." (Pharm13)

"if I'm doing the assessments that adherence part, I should do that adherence part with the name of the medication. So, it should be because it gives understanding or why some of the indications get stopped and that and why some of them people get adherent to them. Yeah. So, the idea of just having a number for medication, it wasn't very clear." (Pharm08)

Q2. How many days in the last week have you taken this medication?

Q3. Do you know when, and how, to take your medicines?

Q4 Is it hard for you to take your medicines in the right way? (like the Dr/Nurse/AHW said)

One pharmacist mentioned generally that patients at their service were confused with questions 2, 3 and 4. (Pharm13). In particular question 4 seemed to raise the most issues. Comments from other pharmacists were:

"Like you know I think you could definitely have scrapped... [Question 3] 'Do you know when and how to take your medicines' because you kind of glean that from the HMR, it becomes pretty obvious but it's not terrible. So maybe I'll give that one an ok. That question [3] and that question [4] really that's just a duplication for most people... most people would just say well you've already asked me if it was hard, and I've already answered that it wasn't hard." (Pharm20)

"And then question 4 'Is it hard to take them the right way' and then they kind of [say] 'Well you've just asked me, you pretty much are asking that question why would you ask me that again'." (Pharm04)

"Another comment on Question 4 was 'it just seems a bit superfluous to me' and I've had a few clients comment like what, and one of them kind of right out said to me 'oh that question is silly'. They don't need that question on the form, they need to add this question instead. Some of them are quite forward in their feedback to what we should be asking and why we should be asking this and should be asking that and that sort of thing." (Pharm01)

"Most of the questions [are] ok. Some of them, one particularly always, no one really understood [the] first time. You always had to explain it. ..., number four.... 'Is it hard for you to take your medicines in the right way'. They'd always kind of look at you." (Pharm21)

Q6. Do you sometimes take less medicine to make the medicine last longer?

Only one pharmacist commented on question six and queried the need for it: "it sounds like it should make sense but it just doesn't make sense to people. Most people... Blankly stare at me and I say, 'sorry that's a tricky question isn't it'. Everyone goes 'yeah I don't know that one'. I'll say, 'that's okay'. And then I rephrase it something like... 'Some people that don't want to take their medicines every day, they just want to take them sometimes to make the pack last a bit longer. Do you ever do that?'" (Pharm20)

Q9. Do you sometimes 'run out' of medicines because it costs too much or it is hard to get more?

One pharmacist mentioned that question 9 would have been better asked as two separate questions, one regarding 'cost' and another on whether it was 'hard to get more' medicines:

"I don't know whether it was misleading but a lot of my patients would say 'yes' to that but it was never the cost because they don't pay anything for their medicines or for the visit, ...it was the latter part of it that they say that their lives got busy and it was hard to come to the clinic. I felt like that one some time when I was ticking a yes for that, I [knew] very well it's not the first part of that question. I felt like that needed to be two separate components, they are very different things." (Pharm10)

However, another pharmacist commented:

"This one's not too bad. We don't have to mention cost really at [health service] because everything's paid for ... basically I end up phrasing that 'is it hard to get to the pharmacy' or ... is it hard you know, so that's not too bad and that can bring up good issues around transport or other stuff. So, it's pretty good." (Pharm20)

Q10. Do you sometimes run out of medicines because you give them away or share them with other people?

Four pharmacists commented on question 10 and weren't sure that patients would answer this question accurately and therefore queried whether it was needed:

"Everybody laughs at question ten 'do you sometimes run out of medicines because you give them away or share them with other people' that always just gets like a total cackle. Which is good, so most people find that just hysterical which is good. I mean every once in a while, from the review if I have noticed something I'll be like 'oh you know you mentioned... maybe ... the puffer' or a couple with Panadol or puffers ... I don't think many other people really share the medicine. It's kind of nice that people laugh at that one but in the interest of space you could probably scrap it." (Pharm20)

"The sharing your medicines and I don't know that they are necessarily going to be completely honest." (Pharm13)

"Some of the questions are very ambiguous, like 'did you give your medication to other patients' things like that. They won't do that. No one will do that." (Pharm24)

"I haven't had anyone tell me that they do share their medicines ... and that's what they've told me they don't share them, but I'm not sure if they would [respond] in that sort of direct question I think patients know not to share their medicines, so they're not going to tell me that they're sharing them too because I'm asking." (Pharm19)

Suggestions for clarification and other questions

Two pharmacists had thoughts on other aspects that could be considered in the patient survey. One was surrounding the patients' physical ability to take their medicines and the other was in relation to whether they take their medications when they drink alcohol. Comments from the pharmacists were:

"what would've been great to go on that, which didn't go on it is... Do you take your medications when you drink? Because many patients do not take their medications on the weekends or when they binge drink... And I think we've captured it though when you asked them how many nights a week [they take their medications] ... But there's not the reasons around it." (Pharm02)

"Question 4.... if I know some[one] is having trouble with dexterity or physicality, can they get into the pack? Can they open the dosette box? So, for them, yes, it's hard for them to take it the right way. It doesn't really say that. And also, that's a bit of an omission there's nothing like 'do you have trouble

opening you pack'... I had a guy who was completely non-compliant because he couldn't open his box but his answers on this all looked perfect.” (Pharm20)

Foundation for education and adherence strategies

Several of the pharmacists reported that the N-MARS patient survey had provided the basis for conversations regarding education and around strategies for encouraging adherence. The “N-MARS has been great to just open up that conversation” (Pharm17) and “when people responded it would often open up another conversation around something that hadn't come up yet” (Pharm01). Other comments from pharmacists included:

“It's quite funny there was one young girl, and she just said, ‘I haven't taken my medication I haven't taken any of it’ and was like, ‘No, oh I'm not going to lie or pretend that I did take it’, she was quite open.... So that was at the second N-MARS that she hadn't been taking it. So, then I had to work out strategies to make it easier and make it fit into her life.” (Pharm06)

“I actually found that it led quite nicely into a discussion about what happens in the morning in their house and what things we could try and modify to make it easier for them to take their medication more frequently. I think this population is high because it's multipronged it's that the concept of health and disease is different. Their life is not like a normal western life. So a lot of the time some of the patients that I saw would tell me that they hadn't taken their medicines and they didn't take their medicine because they hadn't had any food and they thought that it had to be [taken] with food, in which some of them were on gliclazide and yes they probably shouldn't be taking it when they haven't had any food or they'll get a hypo. ... Some of them it was issues like ‘well I don't eat in the morning because I go and hunt first and then I might have food around lunchtime when I've managed to catch something and my medicine [information] said to take them in the morning, so I just haven't been taking them’. So sometimes it was just simple re-education around issues like that. But sometimes it really was food security issues, and they weren't getting regular food. And yet then it became more of a discussion with the doctor about what [medication] was safe for them to be taking when they weren't having much food.” (Pharm10)

Impact on adherence

The N-MARS gave some indication of adherence and most pharmacists found the tool useful for this purpose, but sometimes it did not assist due to patient's previous answers:

“There was one patient ... she wasn't understanding why she's taking all of the medications after [I] provided the first service and in the follow up I found out she's much [more] adherent. But usually the N-MARS score doesn't reflect that because [the patients] don't tell me in the beginning how un-adherent they are ... they don't say anything, they just say ‘Yeah I'm good with that and I'm good with that’. And my perception is ok ... But when it comes to doing the second N-MARS I find that they are tell me that they have now been more adherent ... I have done a lot, a few follow-ups, but I've found that that's happening already.” (Pharm08)

DAAs

All pharmacists, but one, estimated the proportion of patients who were on dose administration aids at the commencement of the project. Their estimates ranged from 33% to 100%. The average was 71% across all services. Pharmacists believed DAAs were useful for the right patients: “Where they're useful, they're very, very useful and I'm very pro Webster Pak or dose administration aids or whatever and you want to call them for people, where it definitely improves their ability and their ease of using medicines ... that little reminder system ... But I think for others they can actually be a bit disempowering. That's my personal belief. So, I am not one of the people who want to put everyone on Webster Pak.” (Pharm01)

Many of the pharmacists had positive feedback about the use of dose administration aids for their chronic disease patients including:

"We have quite a few clients that without those Webster Paks they just wouldn't know what medication to take when and their compliance would not be as good.... I don't particularly like the sachets because you're reading each sachet, you don't really know. I think using the Webster Pak is much easier to see where your doses are that you've missed or not missed. So, I think if you're actually reading the sachets. It's not that easy. Mind you I suppose if they move around a lot, with the sachets they're easier to just take the sachet with them." (Pharm06)

"Definitely I think they're useful." (Pharm13)

Another pharmacist commented that the DAAs helped people who travel a lot:

"Yeah I think so for some people and they, a lot of people travel on as well. So, they need to be organized and get things packed before they go but it's just easier because otherwise people don't, I don't know why they always seem to get rid of the boxes and they just sort of travel with pills popped out or just in foils. There are not even any labels, so you don't even know where they got it from. Whereas your blister pack you've got pharmacy details you've got a list of current meds. Yeah, I just think it's, especially for people that travel. I think it's good and efficient." (Pharm07)

One pharmacist noted that the use of DAAs is limited: *"And also we need to be a bit cognizant of the amount of DAAs we have with regard to the caps and the amount of service provision we're able to access. So, there is that as well which is a confounder too."* (Pharm01)

3.1.11 Project promotional resources

A number of the IPAC pharmacists utilised the posters and brochures around their clinics which had been developed specifically for the project. The posters featured photographs of the IPAC pharmacist. The posters were used more widely and more successfully than the brochures, with pharmacists explaining they were used as a reminder for both the staff of their presence in the clinic, and for patients to become familiar with their faces.

"The posters, that was great because they put them up in all the GP rooms and they were constant reminder to utilise the pharmacist." (Pharm09)

"They do know our faces from the poster, the poster was wonderful and if you ever do it again I reckon put a bigger picture of the faces, as much as we might not like it, but a bigger picture of the faces because [patients] really go 'Oh I saw you on that poster', you know, so it's the posters [that were] great." (Pharm11)

Fewer services utilised the brochures, with several stating they felt the brochures were too complex and not appropriate or specific for the local patient demographic or community (for example, not being in the local language). Several other IPAC pharmacists reported they utilised the brochures mostly with the other staff in the clinic.

"You can explain to them [patients] and they'll understand. They don't need the stuff like that. They were probably a little bit too complex and too many words." (Pharm03)

"So, we did [use] the brochures and we have the poster up on the wall. And I'm not sure if we ended up getting the video to work. I think the thing with [the local Aboriginal] population is because English is not their first language it's quite different to other areas where people might speak English when they go into the shops or that sort of thing so if things are not in language for the local Aboriginal population, you know a lot of the time it's passed by." (Pharm10)

"No brochures are no good because nobody reads. They just don't read English. They'd have to be translated." (Pharm22)

"The flyers that I've printed out are quite useful because I actually use them when I was explaining the project to our team here and to the staff and I have handed little piles of them to different staff and different programs and said look if anyone you know like the women's health program and the elders group and different things that I go along and talk to... I say look if you're there and anyone's worried or has any questions then please you know tell them we'd love to have a chat and we can chat with them at home [or they] can come into the clinic whatever they like." (Pharm01)

A handful of the IPAC pharmacists used other resources with patients although not specifically to promote the project but for education purposes. A few pharmacists reported they had used resources they developed specifically for the project, but most did not develop their own materials with time constraints being quoted as a factor in this:

"I think I'd have liked to, but the time frame around my 16 hours has meant that it hasn't been really possible to do extra things above and beyond what I've been trying to get done on the project." (Pharm10)

"We did up another flyer all of our own which is loosely based around, as it turned out it was similar to ... one of the other ones that was put up there and that was just a one-page flyer as much as anything else." (Pharm12)

"I've just done some signs that I've put around the clinic at [community] in [Aboriginal language] just saying if you are having any troubles with your medicine to come and see me." (Pharm18)

Very few IPAC pharmacists were aware of any feedback from patients regarding the effectiveness of the brochures. The main feedback pharmacists received from patients was about the posters. Comments were made about the pharmacists' photos that had been used: *"lots of people were laughing at the photo.... It's probably not the best one"* (Pharm12) – and recognition of their faces.

"Oh yeah a few have said yes I saw you on the posters and some people then knew my name because they'd seen me on the posters, got my name all over it. My neighbour said I saw your picture at [health service] today." (Pharm21)

Not all participants were asked whether the video clips were used in their ACCHS. For a couple of the IPAC pharmacists, utilisation of the video in the clinics was hindered by technical issues.

"The videos I used but it wasn't going via the stream and I just used it just for one or two weeks." (Pharm08)

"The videos they weren't compatible, so they haven't been able to use those which is a shame. They did put them on their Facebook page though ... they are working on it and they're hoping before the trial actually ends that they'll be able to get them on [the TVs] but there was some technical reason why they couldn't play those." (Pharm17)

"I know you have like the video to play in the practice, but I don't know how useful the video is either because apparently, we have a company that looks after what we're allowed to display, and a lot of their videos are very short. The one that was produced for IPAC was so long... I actually sat in the waiting room one day and I noticed that the volume wasn't so loud anyway so half the time you can't hear what they're saying... So, in my particular practice it wasn't useful I think." (Pharm06)

A number commented they felt word of mouth was the most effective way to promote the pharmacist and the IPAC project, either through the staff in the clinic, or from patients sharing their experience with others in the community.

"I think the biggest thing is getting the word [out] through other Aboriginal people" (Pharm18)

Clinical resources for the pharmacist

The majority of IPAC pharmacists also commented that they had access to clinical resources which was considered extremely valuable:

"The clinical resources we've used have been wonderful. AMH [Australian Medicines Handbook] is open every day. eTG [electronic Therapeutic Guidelines] open every day, and I've had the APF [Australian Pharmaceutical Formulary] open a couple of times as well for different things that we've had to look up. So those online resources have been wonderful." (Pharm11)

"I use them all the time and I wouldn't be able to do what I am doing without them. The therapeutic guidelines, AMH, and MIMs, [the health service] up until recently ... they had access to therapeutic guidelines, but no one knew that they had access, so I was the only one that had access to it. So that's been really good. And I don't think you could do it without access to those resources and I think that all the clinics should have them." (Pharm19)

"The access to clinical resources was invaluable and without which would have been difficult to complete our roles." (Pharm15)

3.1.12 Project in General

This section presents responses from the IPAC pharmacists when asked what worked well and what were challenges in implementing the project. See section 3.6 for a more comprehensive account of all enablers and challenges.

What Worked Well

The IPAC pharmacists were asked what they felt had worked well with regard to how their project operated at their site. Many of the pharmacists reported that support from the health service in general and other members of staff, in particular support from the Aboriginal Health Workers, was of immense benefit to the success of the project. 'Support' included their enthusiasm for the project, welcoming the pharmacist into the primary health care team and the community, and assisting with recruiting patients into the project.

"I think if you've got a good health worker working with you – and I had, well I still do have an excellent health worker working with me at [health service] – the sky's the limit, because this health worker has immediate rapport with people. She is brilliant at starting, even if she's never seen them before, she can get a conversation going and they'll feel there's a relationship there and I can feed off that too to get my own relationship and just join in." (Pharm22)

"I think what's worked well is having people really excited to make it work. I think without that it would be really difficult. I'm very lucky to have that situation whereby some of the very senior members of the team here have been very pro the program and pro me being here regardless." (Pharm01)

"Lots of things worked well, the communication and engagement with the Aboriginal workers and stuff like that as well." (Pharm05)

"Just having [ACCHS support person] and the staff, if [ACCHS support person] is away there's a few other staff members that work with us and just ... having them on board has really helped us reach a decent number of consented patients." (Pharm14)

"They encouraged me to go to the elders' group when I first started. So that was probably the best thing, because by going to the elders, if they accept you, they will spread the news and gossip like

there's no tomorrow. So, I think being encouraged to go to that and going with me to introduce me to those key people. Definitely helps that situation to get into the community" (Pharm04).

IPAC pharmacists who felt accepted as part of the team, which included participation in meetings, invitations to social and community events, being provided with a uniform, were all factors identified by different pharmacists from different sites as things that worked well for the project.

"Being in the clinic where we were really included in being able to come to the meetings, being included in the staff social events, because we definitely got more of a rapport in that clinic than what we do have at the other two." (Pharm17)

"I think just being integrated into the team's worked really well, and just making the medication reviews part ... of chronic disease management." (Pharm21)

"Man, it makes a big difference having the shirt. You are part of the team, you're one of the good guys. It's really good." (Pharm20)

"The day to day, it's just wonderful. I think that they've been so receptive, and I guess [IPAC pharmacist] and I must've done an okay job and be able to talk to people and people must be happy with us to come back and be confident enough to share their patients with us. And we're just slowly, slowly with people – we didn't come in and bound and take over we just kind of worked away in and then got people to trust us. So, I think that's worked." (Pharm11)

Cultural induction, both the general training provided by PSA during the induction for the project and that provided locally by the ACCHS, was identified by a few of the pharmacists as being very important for the project to operate successfully.

"Following the cultural safety training provided by the IPAC project team in August 2018 as well as similar course by a consultant on behalf of the [local primary health network], I feel much better equipped to start to understand some of the issues facing Aboriginal and Torres Strait Islander people. I felt disappointed that I had not had this education sooner, as an Australian health professional." (Pharm15)

"Cultural induction had to happen. I had to really kind of be like 'oh I need it'." (Pharm02).

Developing and strengthening relationships with external stakeholders, especially with community pharmacists, was felt to be important for the continued success of the project.

"I do spend a lot of time liaising with our community pharmacy.... I chat with the pharmacist there and problem solve with them every day I'm here... I'm kind of the translator between the doctors and the other members of the team and the community pharmacy because I speak 'pharmacist' and I speak 'doctor' so I kind of translate in that role a little bit and smooth out any issues." (Pharm01)

"Just, just being able to liaise with the community pharmacists has really been beneficial for this project something that really, really significant part of the project." (Pharm14)

"The benefits have definitely been on the ground level with the staff. I think in engaging that understanding and encouragement about it and, and the communication with the pharmacy in helping people like in ensuring they didn't run out of their medications and there was trying to limit the amount of clients going in to get their pack and finding out they had no scripts left and then they'd be sitting in the waiting room waiting for a doctor. So those kinds of basic things, we've tried to improve the most and I find that's quite successful." (04)

"I think the main thing that we've really ... is the conduit between pharmacies, community pharmacies, between hospitals, between doctors, between clients." (Pharm17)

Many of the pharmacists who had access to their own space within the clinic identified this as something that worked particularly well and enabled them to perform their role more effectively.

"We were given our own space which I think was very important. I don't know how it would have worked if we didn't have that space. I know that some of the others didn't and ...people knew where to find us. We'd come back, if we were away you know we'd come back and there'd be a HMR referral or something left on our desk. One of the doctors would have come through and just left a note or left some scripts or whatever and they knew where to find us if they had a client to see so that was very important." (Pharm17)

"And the rooms that we are in have a lot of equipment basically, blood pressure monitors and glucometers as well, even like a haemoglobin machine. So, we've been able to use that." (Pharm14)

A few of the pharmacists commented on the support they received from the PSA Project Coordinators throughout the project, identifying this as something that worked particularly well for them to successfully complete some aspects of their role:

"Support and training from the PSA team was excellent. With provision of extensive resources, thorough training before the project started and facilitating networking with the other IPAC project pharmacists via the discussion forum, monthly conference calls and WhatsApp group, the PSA representatives gave me every opportunity to clarify, ask questions, seek guidance on any matter." (Pharm15)

"I loved it, to be honest, in general. There were no challenges from my job as such in the sense that I feel completely supported from [PSA Project Coordinators]. I know when I stuff up, JCU's there to clean up my data collection list. I think the core roles are set out. I think the logbook is great. It's very user friendly and it's not overly time consuming." (Pharm02)

"[PSA Project Coordinators] have been such good support that you can just flick an email, 'oh how do I do this' or 'what did you say about this' and they'll come back with the answers, so they've got all the answers." (Pharm11)

Having access to the ACCHSs CIS was another factor identified of being of great benefit to the IPAC pharmacists being able to undertake their role effectively. This is explored in great depth later on in the results section.

Benefits

When responding to the question regarding enablers and challenges, the IPAC pharmacists identified a number of benefits resulting from the project. These included increased numbers of HMRs for patients and consequently financial benefits for the service through increased numbers of HMRs conducted:

"So, in terms of improving the number of home medication reviews it's definitely improved." (Pharm06)

"The number of claims for [item] 900 has gone up dramatically. So just another financial benefit to the health service." (Pharm21)

Increasing the knowledge of the GPs and saving them time by quickly responding to medication related queries or undertaking patient education was perceived as a benefit by the pharmacists:

"I guess just that other stuff there that you see GPs can pop in. That's happened heaps today [during observation/field work]. Things like clinical questions, that's always fabulous. It's just to help with things ... that doctor that just knocked on the door needs some help with some S8 scripts. ... Doctors asking everything from antibiotic spectrums and which antibiotics to use and resistant patterns, to just, what else do we have this week... What laxatives to use in renal impairment. I think the doctors have seen it. I think that's great. And having a face to face suits a lot of people." (Pharm20)

"I mean I just think having the capacity to really talk to people about the medicines in the clinic or at home, like giving people that choice of where they want to be seen, you know, being able to provide full education at the end of the day. ... you can be the smartest pharmacist on the planet, you can do the best HMR report in the world. I mean the bit that matters to the patient is obviously different to the bit that matters to the GPs. I think you'd have to almost answer that question two parts. The bit that matters to the patient I reckon is they've got someone here that takes the time to explain the tablets... It's just it's so satisfying to have time to sit down and go through all of that, and I think for the GPs it's probably super because you know once you are here and they start using you, it was great for them to have other people to ask and it's learning for me too." (Pharm20)

Challenges

The IPAC pharmacists identified a range of challenges which they encountered during the project. Several have been mentioned earlier. One of the challenges a substantial number of the pharmacists experienced was a lack of understanding or lack of awareness of their role by other staff members, and how it differed to the role of community pharmacists and other members of the primary health care team. This was an issue particularly at the start of the project for many. A few pharmacists perceived a lack of support from some of their colleagues impacting on their referral numbers and thereby recruitment of patients to the project:

"Then they had, seemed to have no idea at first. Same for [clinic site]. There was confusion as to what I was doing, why I was there. They didn't even know I was going to be there." (Pharm18)

"And even the staff in the clinic weren't very welcoming in the beginning to the idea of having a pharmacist among them and they didn't know what I am doing and that's why it took me from the beginning to just educate them and let them know about my role" (Pharm08)

"But you know I'm not getting referrals... I'm getting referrals from the younger doctors, because I'm not really getting referrals from the two doctors that have been here for quite some time. They just do their own thing." (Pharm13)

"Staff engagement in the project – as a new face within the health service, I relied heavily on referrals from the long-term clinical and support staff. I requested help on many occasions to increase referral numbers but due to time constraints and lack of understanding about the project, it never really improved. I understand that staff are already time pressured to complete administrative tasks so adding an extra request may have been onerous." (Pharm15)

Workforce issues, such as shortages of GPs in some services and staff turnover, including locum GPs coming in and out of services, presented further challenges. In addition, some of the IPAC pharmacists found it difficult gaining the GP's time to be able to discuss patients and follow up on recommendations. This was particularly challenging for IPAC pharmacists who were part-time and only present a limited number of days per week in the ACCHS:

"I mean it's been really hard ... with staff changes for one and then restructures and different people coming in, I feel like I'm explaining what I'm doing weekly if not more. And I think that's been a bit of a barrier to the success of the project because there's just been not enough consistency in it." (Pharm19)

"I think I said it in the middle of it I believe that main challenges there was having locum GPs and having the pharmacist two days per week." (Pharm08)

"What has been challenging. I think getting access to doctor time is a little bit challenging in terms of being able to turn the recommendations into improvements for our clients." (Pharm01)

"Not being able to be more involved with what the GP does. So, we haven't had that proper GP collaboration, not what we would like." (Pharm14)

"Staff turnover; I believe this issue is not isolated to our service but the nature of our GP coverage in the service means we have four part-time GPs and had a change in registrar during my stay." (Pharm15)

In addition to staff issues and attitudes, it was also the observation of a couple of IPAC pharmacists that they felt their health service wasn't ready to be involved in such a project due to internal organisational issues:

"I just think that maybe I think it would have been nice if the health service had come to the party more and provided it a go to person or a mentor But the problem is in this particular instance the health service was in chaos. There was just a lot of internal things going on and it was difficult for them as well at that particular point in time." (Pharm09)

There were a number of patient-related factors which also posed a range of different challenges for quite a few of the pharmacists. These included a more mobile patient population in some places, patients attending the health service opportunistically and not showing up for booked appointments, sorry business, and language barriers.

"I think the difficulties out there being the staff turnover and the sorry business and the moving population and shortness of clinic space. that's probably been the biggest barriers to try and overcome to see it be successful." (Pharm10)

"Given the number of clients, I was allocated a 0.2 FTE equating to only one day per week. This limited the number of clients I was exposed to. I found that booking appointments ahead of time didn't work well, with a number of people not attending these pre-booked appointments." (Pharm15)

"There was no Aboriginal Health Worker. Nobody in the health service could speak more than a few words of the language" (Pharm22).

Whilst all IPAC pharmacists had access to their services' CIS, a few pharmacists experienced IT issues which impacted their access to the CIS and patient data:

"The main barrier was IT because at the start I had, I had the Communicare issue and then even now half the time the server drops out. The IT just drops, you just lose Communicare, you lose Internet and it's just really hard to do things like you just got to chase it up the next week and then hope it's all good and doing the same thing. But that was probably that's one of the biggest issues we've had and not having Communicare offsite. Because if I had Communicare offsite I could do so much, so much more." (Pharm07)

"Another barrier was just having limited access to Communicare at the site. We were putting all our data into Communicare. Also, technology has been a bit of an issue is just this technology issues such as the Internet going down so we can't access anything. Communicare plays up quite a bit. I've had a good working relationship with the IT guys trying to fix all my computer issues." (Pharm14)

A number of the IPAC pharmacists also found it challenging to manage the different requirements they had to fulfil within their role, particularly the logbook requirements during busy clinic days, and especially for those who were part time:

"In terms of the role I think the hardest part has been time frames for actually doing all of those things. So being out there for 16 hours a week by the time I've run around and popped into some consults and counselled some patients about their inhaler use and caught a couple of patients to try and recruit and conducted the N-MARS and then run around chasing up some medicine reconciliation between the hospital pharmacy and the local pharmacy and answered a few medicine information questions then actually finding the time to sit down and do the med reviews on top of that and then adding into that drug use evaluation and the liaison plan. I think I feel like the time frames for actually getting all that done in a day or at least in a part time position has been very difficult." (Pharm10)

"Challenges have been having enough time to write up the logbook because the day is just go, go, go and even yesterday I tried to close the door and like this morning people still knocked and wanted to know. So, it's really hard." (Pharm11)

"You know I still don't think we catch it all [in the logbook], especially in those early days because it was just so overwhelming. Trying to find spots to put stuff in I found was hard because it was a lot of stuff that we were doing that I couldn't really find" (Pharm17).

Clinical information and data access

The IPAC pharmacists reported unanimously that access to the CIS was invaluable to being able to perform their role effectively, providing the pharmacist with a more comprehensive and contextual insight into the patient, allowing them to leave notes in the patients' file, manage their own appointments, and saving a lot of time for both the pharmacists and the GPs.

"Essential, ...you couldn't do it without it. I already had access. And that was something that the clinic actually was kind enough to give me right from the early days... obviously I understand that that's not something given to a lot of visiting people particularly not pharmacists or pharmacies doing HMRs and I very much value that. The GPs very much in return value the fact that I didn't have to ask banal questions like have you checked their lipids. It just meant that I could just go in and look for stuff and see have they checked their lipids and were they appropriate. Or had they checked their renal function and was it reasonable. All of that sort of stuff. It just really expedited the process and I could give them the three key points that they needed to focus on for the client rather than 27 questions which is what you have to do to kind of cover all bases if you don't have access to the information that you need to make recommendations." (Pharm01)

"I don't think you could really do the project without access to the clinical software. Certainly, for the purpose of gathering all the information that you need to do the med reviews. It's sort of been invaluable." (Pharm10)

"Oh immeasurably. So, when we were volunteering [at the service], we didn't have access. So, the difference in being able to read through someone's history have a look at when the medication was ceased or started, look at blood tests, look at letters from the hospital, the mental health specialists' letters, just gives you such a bigger picture of the patient and sometimes the patient can say 'oh I don't remember who started that' or the doctor will say 'why are they on this', and even though they had the access they've got that limited time I guess and they don't have time when the patient's with them and five patients waiting just to be able to take that time to scroll through and see what's happened and get a picture of that person's clinical life, makes so much difference. Before we were working blind, really, we had an HMR referral and that was it. And if we were lucky enough and the doctor did attach the bloods then that was fantastic. But more often than not they didn't. So wonderful." (Pharm11)

A couple of the IPAC pharmacists did note however that some of the clinical information software is challenging to use effectively so orientation to the clinical software is important. They also noted that some guidelines on what information to leave in the patients' files would have been useful.

"The induction was okay in terms of how to actually use all the parts of Communicare. I don't think Communicare is particularly easy to use. It often requires a lot of searching through progress notes to try and find bits that relate to medicine changes. It's not always easy. I feel like the orientation process on how to use it was good. I just possibly could have done with a clearer project guideline from the project point of view. What to put in and what not. Like you know clearer guidelines around leaving a note every time that you go in there and what those notes should say and that sort of thing." (Pharm10)

"I was able to access it straight away but there wasn't much training provided for it and then there was no one here who was, who had the time I suppose to give me information about it so I've been learning a lot of that as you go." (Pharm19)

Travel and work outside hours

Travel requirements and travel logistics varied at different locations, depending on the size and remoteness of the communities, and how many additional sites or locations from which the ACCHS operated. For this reason, the impact of travel on the pharmacists' roles varied:

"[From my home] ... it's about an hour and a half each way." (Pharm07)

"The other pharmacist that's been doing this clinic has been going even further out, so to their [community name] and [different community name] clinics which require charter flights to get to, so the logistics around it are quite hard." (Pharm10)

"It limits the time you get to see people when it's with [community]. With [different community] it's fine. I'm two weeks there so I'm flying on a Monday morning and I'm there by 10 or 11 and leaving sort of 3 o'clock on Friday so there's plenty of time there. [First community] is a bit different. Again, you're not there very often, not there for very long, just because of the distances and then you're limited to who's there at the community. And if there is a ceremony or a funeral going on then you're likely to have very few people there." (Pharm18)

For many, however, the communities or towns they worked in were quite small, and they were able to travel more frequently to conduct home visits, usually with a health worker or nurse, which was noted to be beneficial in trying to chase up patients who hadn't or weren't able to present to the clinic for follow ups.

"I've got a notebook with all my follow up people particularly the IPAC people that I need to get back to or follow up ... so I've always got lists of people that I'd like to see. We'll often, with Aunty [name], we'll often just do drop ins. And then she'll go and knock on the door and go 'hey is it okay to have yarn with [pharmacist]'? And then if they're home, often they will say 'Yeah, no problem'. It's trying to catch people which sometimes is a bit of time that we waste driving around community trying to find people, particularly if there's events on or sorry business or there's something else happening in community or payday or, you know, insert other reason... The driving around community from one end of [the town] to the other is probably about 20 minutes. So, it's not that big" (Pharm01)

"Today it took just over an hour and there were probably about 10 packs to deliver, by the time you have a chat with each client and make sure everything is going okay, it's good." (Pharm04)

"Yeah so [health service] has different clinics all over so they do have one in town and they do have one in a very close community called [community name], and the one that I've been going out to is one of their clinics called [different community name]. It's about 20 kilometres away, so it's not a huge

drive out there. Yeah certainly for a population of people who generally don't have cars the [local] people, unless they get on the bus, spend most of their time out there.” (Pharm10)

There were just a handful of pharmacists who did not do any home visits or travel away from their clinic, which was not necessarily without trying:

“I didn’t end up having to travel for activities in the service. I attempted to go on a couple of HMRs but couldn’t find a willing staff member to attend or the patient cancelled.” (Pharm15)

Approximately half of the IPAC pharmacists reported they had access to clinic fleet vehicles to undertake community visits, whilst others had to use their own car, which was the main contributor to out-of-pocket expenses:

“There’s a few clinic vehicles but they’re often already being used so quite often if I was travelling around the community, I’d just go in my car, but I’d have one of the other nurses with me or something.” (Pharm10)

“Most of the time I’ve been pretty lucky, and I can get a clinic car but there’s definitely been probably like maybe six to ten, six to a dozen times I’ve had to use my own car when there just hasn’t been a clinic car available. I’m happy to do that.” (Pharm20)

At one site the IPAC pharmacists used the community pharmacy car which was reported to have benefits, particularly in relation to being recognised whilst driving around the community.

“We did do home visits with the pharmacy car. And it’s good because it’s they can tell who it is because it’s got the logo on it, a big blue Hilux. We have actually ... been driving around, and people start waving us down now. So that’s been really good. They want to have a chat to you, so they just wave you down.” (Pharm07)

“Everyone knows our big blue work car with our signage so they see the car come into the community and they know the pharmacist is there. That’s a positive.” (Pharm14)

A few IPAC pharmacists reported they did have to do some project work outside of their contracted hours. Reasons cited included the need to meet logbook and data entry requirements, or because of travel required during clinic hours.

“Not a hope. Not a hope. I had to do [logbook and data entry] outside allocated hours.” (Pharm22)

“I know at the start of the project we were under the impression that travel should be included in our time. But I was just finding it was so tight, I was so time short out there, that by partway through the project I just stopped including that [travel time] and just ... stayed out there longer beyond that time to try and catch up on stuff that I was falling behind on... by the time that [I was] answering medication information questions and jumping into consults and that sort of thing. That’s when I stopped allowing the travel time to be part of my hours because it wasn’t practical.” (Pharm10)

“I do [some work outside hours] ... I might come home if I take an hour off the clinic or something like that. I keep track of the hours I do with the manager and everyone. I tried to do the logbook at the clinic but just got interrupted. HMR report writing and a lot of the logbook entry I do at home. So just the printing like a print HMR referrals at home, I print N-MARS at home. I print consents. You know I go out and do HMRs on non-IPAC days. I take a consent, and N-MARS and stuff with me, so I do a lot of that organising at home as well. So, I suppose I do quite a bit time-wise out of pocket.” (Pharm17)

“I think sometimes I’ve been a bit flexible with my IPAC hours and my [clinic] hours. I think I have been using the logbook sometimes on my non-IPAC days ... so there’s a bit of flexibility there.” (Pharm21)

Data entry experience

After some initial confusion, many of the pharmacists reported that they found the logbook and data entry quite straightforward once they were familiar with it, and a useful way to reflect on what they had done that day:

"Very straightforward and so simple. You just you answered the question that guides you to the next one to from you answer. Yeah I find I find it so easy." (Pharm05)

"Just a little bit of getting used to it, then once you know you've done it a few times it's fine." (Pharm09)

"I think that the logbook has been good in that it makes me try to do it before I leave the clinic at the end of the day even if that means I'm still sitting here later than I should be because once I walk out that day, it's very hard to remember, that particular thing is it's going to be a couple of days before I'm back in the clinic at best. So, I really try and get that data entry in, but it makes me reflect on what I actually did during the day which is probably a good thing." (Pharm01)

"I had only one minor issue with data entry which was resolved within several hours, I found the logbook user friendly and I suppose time consuming, but I can't think of a faster way to enter the essential data." (Pharm15)

The main issues quite a lot of the pharmacists found with the logbook however, was it was often a time-consuming task. A few also commented that they felt it took time away from more useful work they could have been doing instead:

"The logbook I think has been quite laborious and has perhaps sometimes taken away from time that I could have spent you know being more useful in the clinic." (Pharm10)

"I think it takes a lot of time compared to when you when I could be doing actual work." (Pharm19)

"It takes a bit longer than I was expecting. I think the biggest issue is the fact that I'm not in a room all the time so I don't, although when I come in I log in on my computer but I'm in a shared area and I only have a clinic room sometimes, and when I'm in a clinic room it's a different clinic room each time so I don't always even have it open... I'm sure I forget things, so I apologise for that. I'm sure there's data and things I've done that I haven't recorded... And when I look at the log book I'm like oh I wonder if you just think I'm not doing anything all day, when I've been really busy doing stuff, but some things I'm not sure where to put. Some things I'm not sure if I can actually log appropriately even though I'm busy doing project work." (Pharm01)

"It's just a bit tedious, you have to be super organised. I do cross reference because I have an excel list of who I've signed up and what I've done with them. So, I just every now and then check like 'have I actually entered that into the logbook' and just the ambiguous things like medication information and the pharmacy liaison. I mean I could talk to the pharmacy five times one day and then remembering 'have I spoken with them and have I put it in the logbook?' Yeah, it's just time consuming but it's not hard." (Pharm03)

Quite a few IPAC pharmacists also reported a lack of clarity about where or how to enter certain information, including if they were completing the logbook before having the opportunity to follow up on recommendations they had made and actions that had been taken as a result:

"So, I think when [PSA Project Coordinator] came around it was useful because she had ways of entering more stuff on the logbook that I kind of didn't really enter because I didn't know where to enter it." (Pharm06)

"Most of the time but there are some questions that were confusing like... 'Did you have any recommendations?' Yes, I have recommendations. 'Did you speak to prescriber?' Sometimes I didn't. I recorded it before speaking to the prescriber. So, this part the answer was a bit funny but other than that it was ok." (Pharm08)

"Some of the other areas that are part of the core roles like the preventative health I've found, while I discuss it every time I'm having a consult with a patient, it feels like there isn't a spot to necessarily put that in the logbook as a separate entity... Whilst I'm doing it because I am talking to everyone about their diet, exercise, smoking, alcohol, all the rest of that on a one-on-one basis. I'm not sure how that meshes up with the logbook like whether that represents anything in the log book." (Pharm10)

A couple of pharmacists also commented about the potential for inconsistencies in the way things may have been entered and recorded by different users:

"I feel like you're going to find there's going to be some differences in a recording attached to personnel... Maybe they could have they could have probably tried to just make it more obvious what goes where in the workbook. And also, we have got conflicting advice sometimes over things in the in the [logbook] and it seems like it's morphed a bit over time... Just having that consistency across the users probably would be my main comment." (Pharm20)

One IPAC pharmacist reported issues with tracking patients where data was documented in two different logbooks due to a job share role.

For several IPAC pharmacists finding space in the clinic and access to the computers, particularly if they were working at remote sites away from the main clinic, was also a challenge with regard to the logbook and data entry.

"I had no office. I had the team. I got myself a couple of boxes. The [photocopy] paper boxes that I kept my paperwork in, and I just shuttled that round the tea room in which there were two computers at one end. Those computers had to be shared with one or two of the nurses as well, these two computers. Because I was trying to put stuff into the JCU log book I was trying to use one of their computers and on a table away, I had to then set my laptop up which was where they tried to sit to have a cup of tea. There was no other space so I just did the best I could." (Pharm22)

"It becomes quite tricky when we're doing other things with patients and running around in here and liaising with staff. So that's been the tricky bit trying to get it all into the computer system. I mean we tried to get remote access to Communicare, but we weren't successful." (Pharm14)

Support from Affiliates

Most of the pharmacists had not had any contact with their respective State or Territory NACCHO Affiliate. Only a handful of IPAC pharmacists had had direct contact or received support from their Affiliate and it was quite minimal when it did occur:

"He was good, he rang, and we talked about things. He was going to come up in a couple of weeks but it's not going [to happen] now. I think he's just going to do phone support. I feel like I've got a heap of support between everybody between [PSA Project Coordinators] and [NACCHO Project Coordinator] and [Affiliate Representative]. I think that it's heaps of people there that I can call on." (Pharm18)

"Yeah [person's name]'s been in contact a couple of times checking you know making sure thing is going okay." (Pharm04)

"I don't know that I had a lot to do with them. I know they had the [Affiliate] support person come on board at some point. I think for me personally I've sort of felt that I'm so time [constrained] doing everything else that I didn't actually really have time to liaise with someone else. I wasn't sort of clear what they would be able to offer me anyway. Because they are not in-person out here anyway, they're I think [State capital city] based. So, I didn't actually end up catching up or liaising with the [Affiliate] person. I know that he did try to email me." (Pharm10)

Practice Outside Role

A number of the IPAC pharmacists also worked concurrently in a range of other jobs outside of their IPAC role, including shifts at the local community pharmacy or hospital on the days they weren't working in the ACCHS, performing HMRs or RMMRs for other medical practices or nursing homes, and teaching positions.

"I have my own HMR business and I work at the hospital part time." (Pharm09)

"Depending on the week I do one or two [days] and one or two nights in the community pharmacy but I also do medication reviews in the nursing homes in the area as well." (Pharm12)

"I'm doing IPAC three days a week and I'm lecturing two days a week ... They've kind of put me in charge of the QUMAX program as well." (Pharm13)

"I spend my other three days a week teaching their colleagues medical updates, I think that all gives me a bit of credibility that I'm not sure if everyone else just walking into an AMS as a pharmacist would have off the bat." (Pharm01)

"I'm at the [town] Hospital, so I live in [town] and I am commuting out here." (Pharm16)

"Four days' full time in community pharmacy outside the IPAC role. Sometimes I do the [remote area] visits. Monday to Friday and some Saturdays as well. But then obviously Friday is my IPAC day." (Pharm07)

3.1.13 Future Recommendations

A role for non-dispensing pharmacists

All of the IPAC pharmacists answered unanimously, and definitively, that they feel there is role for non-dispensing pharmacists in ACCHSs.

"Yeah absolutely, I think it's quite a useful role. I think the more that the teams get to realise the support service that you can provide them more they start to utilise it." (Pharm01)

"There's definitely a role. It is very exciting. I'm very happy to be a part of it." (Pharm06)

"Yeah I think there really is. It's just a matter of how it gets funded. That's all." (Pharm12)

"Absolutely. Yes. All GP clinics should have them. Absolutely, and community health services." (Pharm13)

"I absolutely think this role is worthwhile in the ACCHS setting." (Pharm15)

A number of the pharmacists reported receiving a lot of positive feedback from both staff and patients about their presence within the clinic and the benefits their role has provided and expressed concerns about who will fill the gap they will leave when the project finishes.

"It scares me to think... It hasn't scared patients but there's a lot of them have gone 'what do you mean November!?' Because you know [GPs have said] 'here you can deal with that'. What happens after November, like who is going to do it?" (Pharm02)

"We've been so beneficial there already. I think they would miss us there. And there's no one else going to go in and do that role. I think we've seen the benefits; people have told us the benefits. We pick up interventions that would have been missed if we weren't there. And that happens all the time. There's a real benefit to that role. So, if it continues then yes [I would stay in the role]. If it doesn't continue, I think we would still probably do something anyway just to keep that service up." (Pharm07)

"Oh absolutely. I hope there's some funding to make it worth the while so even if we go back to volunteering half a morning a week then at least [the] patients will know we go in on this day and you can get someone to help you, and then that's fine. But I think if there's a way of finding funding to keep someone in there's certainly health benefits for the patients from my point of view hopefully the data says the same but just the voicing from the patients, the feelings you get and the comments you get from the doctors and the nurses is that you know people are learning more about the medicines or being able to ask someone who knows.... [there is] definitely a role." (Pharm11)

A couple of IPAC pharmacists highlighted just how well a non-dispensing pharmacist fits into the model of care of Aboriginal community control, and how culturally-safe and culturally-competent care is when pharmacy services are embedded within an ACCHS.

"Even what the patients were saying yesterday [during observation/site visit], like 'don't take this away from us!' We've got this this fabulous resource here now and I think I think it fits in really nicely with the whole ethos of community-controlled health care like having access ... for patients to medicines information in a clinic that they're already coming to, that they're comfortable in, where you don't have issues around confidentiality like you might have in a community pharmacy. Obviously, you know I'd always say our community pharmacy colleagues do a great job but it's a different environment, they're busy, it's a shop, its people standing over your shoulder. People can come into the clinic room here and have a yarn and I think that's so important for people. Continuity of that sort of service and having it all being a bit of a one stop shop... You can see the GP, you can walk in, you can see me, I can then duck back and ask something we can get some bloods done by the AHP, it just makes much sense. So, I think it all fits in perfectly with the ethos really." (Pharm20)

"I think it's really valuable to support the clinicians, so they really appreciate our support and help ... just to provide that service of culturally appropriate medication reviews because we're within the health service that are trusted. I think it's hopefully therefore more culturally competent than the community pharmacist going out and visiting them at home. So, I think it's just the whole being able to offer more of, the health service offers more of a holistic service." (Pharm21)

The reasons why the IPAC pharmacists felt a non-dispensing pharmacist role is needed in health services were similar. Many pointed out the clear and direct benefits to patients in having a member of the primary healthcare team with the unique knowledge and skills that pharmacists have, particularly in reducing medicines-related incidents, and having the time to provide essential education to patients around their medicines.

"When I was there, I could see how a pharmacist would be beneficial. Integrating a non-dispensing pharmacist ... has knowledge that some other health workers or you know other staff members working in the clinic, they don't actually have [that knowledge]. And they can benefit the doctors in lots of ways that are currently not available. I see a big role for a non-dispensing pharmacist in GP clinics in general, and of course in Aboriginal health services in particular given there is more needed there." (Pharm05)

"We really need pharmacists working in the Aboriginal health service, especially in remote and rural areas. Because the medication management part is very essential there, and without it there is a lot of incidents happening. People get admitted a lot to the hospitals. We are ... losing people because of this mismanagement." (Pharm08)

"Definitely. I am very happy with the work that I am doing. I'm happy with the progress that I've made so far, and I think that there's still heaps of work to be done. And I just think it's super awesome for pharmacists to be expanding their scope of practice into these kinds of roles. I think it's really good for patients because they're getting someone who is focused on medicines and knows about medicines in their health care team which hasn't happened before. I think it's good for the service to make sure that they are having quality use of medicines. I just think it's awesome." (Pharm19)

Opportunities to expand the role and become involved in additional areas that weren't covered in the 10 core roles of the IPAC pharmacists were also highlighted.

"There is a definite need for it and we're filling that need, and I can only see it growing and becoming more of a role ... as we progress in time. Like I said, there's a lot of areas that I'd like to get more involved in, like the homeless hub, but time constraints and core roles sort of prevented [that] at this time." (Pharm17)

Skills required for the role

The vast majority of the pharmacists identified good communication skills were essential for working as a non-dispensing pharmacist in an ACCHS. Many of the pharmacists noted that to work effectively in the role one needs to be able to communicate and work well in a team, and be able to adopt different communication styles for different health professionals within the team, and for patients who may come from backgrounds with varied levels of health literacy, education and for those whom English may not be their first language.

"To be honest I think your clinical skills are very, very important no question. But I think that your communication skills are far and away more important. The way you can explain things to people, the way you listen, your storytelling. I guess negotiation skills both with the clients and also with the doctors in terms of this is why I think this is important which can sometimes come a little left field for where they were coming from and being able to phrase it in a way that doesn't put anyone off but still gets the importance of your point across without creating any problems or making anyone feel like they've [in trouble] you have to be quite delicate when sometimes you're sitting in with someone questioning what they've done." (Pharm01)

"You have to be an understanding person and understanding in how to communicate with doctors and that that it's something's not going to happen at the drop of the hat and that it will take a fair bit of time and commitment to get something done... And I think you have to have good English and good understanding with clients as well and being able to communicate with people who sometimes can't read and write and haven't been to school." (Pharm04)

"Definitely communication and teamwork good clinical knowledge. I think that collaborative practice being able to work in a team is really important. And being respectful of other peoples' roles." (Pharm13)

"Great communication skills. Respect for the culture and where the patient [come from], respect for the client's life. I guess their socioeconomic background the literacy background and what other things are impacting on their health. Other than just the fact that they've got health problems, there's lots of other things that are priority in their life as well as a good knowledge of what medicines are around and how they work." (Pharm11)

A couple of pharmacists also pointed out specifically that listening is a crucial aspect of communication, and a particularly important skill to have when working in an ACCHS.

"I think as long as you, I think that the [local Aboriginal] population doesn't respond well to being talked at. So, they say [language] that's us, the white people, do too much talking and not enough listening. So, for me personally I've found you can tell when people are switching off. So, when you've spoken to them about one thing and they've started to look away you're like 'all right, how about we talk about this at the next [visit]'. The person probably needs to not go in with their own predetermined agenda and be there solely just to hear what the patient has to say. Probably don't need a pushy person; you need a person who has good listening skills but also that feels confident enough to have medicine related discussions with doctors." (Pharm10)

"You've got to be able to shut up a lot because that's been my hardest part is because you've got to have the gaps in the conversation. It's very different from if somebody is not talking to you. You just sit there for five minutes before someone comes out with something. I find that that's the bit I find hardest. I've got to stop myself a lot." (Pharm18)

Flexibility, adaptability, open-mindedness and willingness to learn about culture, and other social determinants of health, were also mentioned by several of the pharmacists.

"I also think cultural skills are very important. And that's like I said, I thought I was quite [aware], I've grown up around here and the kids have grown up around here. But since starting the project my eyes have opened even more in that area. So, culture a definite one." (Pharm17)

"I think you have to want to understand the culture. I think that, I don't know about other areas but up here culture's really vital. I think we could all do with a lot more knowledge on poverty and the impacts it has." (Pharm18)

Strong clinical skills and prior experience working as a pharmacist were also identified as important attributes.

"I think you have to have some sort of clinical background because, I think if you came straight out of uni with a degree in pharmacy, you'd be a bit lost. You have to have a holistic approach. It's not just about 'well, put these patients on a beta blocker, that's a heart medication' like you've got to have that clinical background and be able to relate it back. You've got to have a very good understanding of your conditions." (Pharm02)

"Probably the biggest is just experience as a pharmacist. I don't think you can throw in a newly registered person... I just think it's that experience to be honest. I [think] all the skills that you develop being pharmacists are important even the dispensing part of it, you have to understand how medicine is supplied." (Pharm03)

Many of pharmacists felt it was important to be accredited to conduct HMRs. Whilst a couple commented that even without being accredited, they still possessed valuable skills and knowledge, others observed the value for the clinic in being able to conduct HMRs and attract the additional income through Medicare.

"I think you need to be accredited in HMRs. There's a lot of knowledge that you need from that which is, I don't think I would have had before I did that training." (Pharm04)

"I mean I think being HMR accredited probably is pretty important. I know not everyone on the project is, but I feel like, A) it just means you're more comfortable with your clinical recommendations and B) it does help that the health service can bill for our work. I know it's not the be all and end all but until pharmacists have Medicare billable numbers it's the only one we got. And I think that that's just a nice extra thing for the health service to be able to do." (Pharm20)

"So not being a HMR accredited pharmacist I think has been probably one of the hardest parts for me... I think for me I probably would have felt more competent if I had already had the piece of paper. But I think over time I've realised you know that you can develop those skills in other ways. And while it has been probably a disadvantage to the clinic in that they haven't been able to claim those HMRs, certainly my clinical skills were still adequate for the job." (Pharm10)

"Not being HMR accredited is a disadvantage for me at the moment...but I think once I am HMR accredited it would be a real asset to the service to offer both in-clinic and just HMR-affiliated reviews." (Pharm16)

Suggested changes to the role

Several pharmacists could not identify any specific changes they felt needed to be made to the IPAC pharmacist role for future non-dispensing pharmacists in ACCHSs. A couple of the pharmacists explained they felt the ten core roles of the IPAC pharmacist were quite broad and did not limit them in any activities they performed within the service.

"I think anything you do can be tied in to those ten core roles. And at the end of the day I don't think those ten core roles limit me doing anything here, because I did whatever was needed to be done." (Pharm12)

"I think over time [the role] will develop. It'll change over time to what it needs to be. And it's probably different in every health centre as well." (Pharm07)

"You know I think that's pretty encompassing. I mean there's a few times, as I said, that I've probably stepped outside of [the ten core roles], but I think they're general enough that I think it is pretty reasonable. And my understanding is that the different clinics are able to utilize those services in different ways in the way that's going to work best with the way that that clinic currently runs their staffing etc. So, no I don't think so." (Pharm01)

Expanding the role to focus on quality use of medicines for other patients in the clinics, rather than solely focusing on those with chronic diseases, was mentioned by a number of pharmacists.

"Definitely we would do a review on every patient. But how repetitive that is or how much follow up and all that sort of stuff, it's not that I don't want to follow up, but you know I have to see the patient again for the trial to be worthwhile, whereas yet I could be focussing on more patients." (Pharm03)

"I think it's probably really individual depending on what the clinic needs are but ultimately it would be nice for it to be so embedded in the practice that it is second nature for everyone to just send everyone on to the pharmacist after they finish with them. If they're not acutely unwell it would be nice for the role to evolve into that and I think we've made steps towards making that happen." (Pharm10)

"I wouldn't have it just specifically for chronic disease management. I think it should be quality use of medicines, anything related to medicine." (Pharm13)

"We can expand. There's more that we can do but there's only so many hours in the day. There are just endless possibilities really. I think you can get involved in the families as well. But you know we haven't even touched that side of it, it has pretty much been all chronic." (Pharm17)

One pharmacist suggested in future the role could include greater involvement in systems and organisational-level work, particularly in terms of policy and procedures.

"More organisational... They have started approaching [name of other IPAC Pharmacist] and I to do more policy and procedure type work to help with them re accreditation. We're happy to extend

that.... more organisational, setting up systems and to be able to improve team-based collaborations.” (Pharm14)

There were a couple of pharmacists who offered different opinions regarding whether there was a need, or benefit, for the pharmacist to also do some dispensing in the ACCHS. One pharmacist commented *“I think staying away from dispensing and supply of medicines in our role is a good thing. A couple of times, the doctors have said ‘do you have a code for the pharmacy?’ No, I don’t. And I actually don’t want it because then you spend a lot of time doing admin documentation work that a nurse can do quite well here in the clinic. And you’re not using your medication knowledge to benefit a client because you’re busy doing ordering or something so I think if it stays as a non-dispensing, non-administering type of role, then it’s wonderful.”* (Pharm11)

However, one pharmacist felt having some dispensing rights might help strengthen relationships with patients, *“I would say the dispensing part might help in some areas... Sometimes it might be useful for the pharmacist there to dispense medications, if they can, because that might increase the relationship between the pharmacist and the client.”* (Pharm08)

Days of the week actually required

The number of days per week the IPAC pharmacists felt were required for the role varied considerably depending on the size of the ACCHS. The number of days the GPs were present at the health service was also a factor. Some pharmacists suggested splitting days to be available for busy time-periods in the clinic and for meetings, when the GPs were working, and to be able to potentially capture more patients.

“Well to be honest I’ve been thinking about this because I’ve had a few quiet weeks [when] I haven’t had an awful lot to do. Because their client base isn’t as big as I thought it was, I’m not sure we really need 2 full days for [the role]. Possibly one day, but possibly have [the role] on different days because if you did the same day you catch the same people all the time.” (Pharm06)

“Well probably two days at this particular service. A bigger [service] would probably benefit more from a full-time pharmacist. If there is a possibility for a rotating pharmacist for example this one and other ones close by. Then maybe one or two days here, one or two days there if [it is] a drivable distance.” (Pharm05)

“Rather than doing two full days it would probably make more sense to do three or four half days but mainly because there’s always GPs here in the morning and usually two of them, whereas in the afternoon it quietens off... I have one bloke I’ve been chasing for six months now and either he decides he is not coming on the days when I am here, or the days I am here he won’t come in anyway. The size of the clinic [is important], in all reality and if I started again and you said what do reckon I should do, I’d have said two mornings, I would have said two mornings or something like that, that would have been about perfect.” (Pharm12)

“Days per week would depend on the site and GP coverage. I would think that every weekday for at least a few hours on site then [undertake] HMRs around that.” (Pharm15)

A couple of pharmacists suggested there may be differences in how many days they felt were required, compared to what the ACCHS wanted.

“If you ask the clinic, they’d want me here every day. I think there’s pros and cons. The two days a week is great. If I was here more often, ... I think that the doctors certainly would make more use of particularly drug information, the kind of quick questions and things like that... However, I think three days would probably be great. So, then there’s only a day in between if follow up is needed.” (Pharm01)

Many pharmacists seemed to feel that it was a five day per week position, if not full-time, particularly given the challenges in following up with patients and the need to be available opportunistically.

"Some days I see lots of patients and some days I don't. So, I mean you could do it in three days. But I think being here for the five days, Indigenous health is very unpredictable. You can't set days so being full time really allows me to have a bigger scope." (Pharm03)

"So, for me personally, I like the three days, but I think they could do with someone there five days because the patients just don't come in on those particular days or whatever and it's opportunistic. They want to grab me. And when you're trying to follow up with stuff and then you're not back again until the Wednesday that's hard. I would only want to do the three days, but I think they could benefit from having someone full time." (Pharm13)

"It needs to be a full-time job. And I guess even though mine is three and a half days, I'm always accessible. I have probably worked more than three and a half days." (Pharm23)

For one pharmacist working in a very remote community, despite its relatively small size, it was suggested that more time was required more frequently to be able to build relationships and effect change.

"I don't think that a day or two is enough. Maybe a week a month rather than two weeks every two months. The trouble is the expense of getting someone out there, for if they are not actually living in [name of town] would probably preclude that in reality... I would like to see more but I would I think that because it's so remote and has so many issues in the way the model works back to front from the normal model, you could probably have done with at least half as much time again to achieve no more than what was asked of us to achieve. Because the trick is to revisit and revisit until you can slowly get a bit of understanding coming, that basic understanding coming into what you're doing working with people." (Pharm22)

Advice to others

The pharmacists were asked what advice they would give to someone who was considering taking on a role as a non-dispensing pharmacist in an ACCHS. The suggestions were quite broad. Being involved with the community outside the clinic was advice that was repeated by a few of the pharmacists, as well as participating in cultural training and developing relationships with the other members of staff, particularly the Aboriginal Health Workers.

"To be able to mingle with the community itself on different occasions, not just to stay inside the clinic." (Pharm08)

"Meet your elders, understand who the key people are in your community and build a respect with your doctors and Aboriginal Health Workers." (Pharm09)

"Do their cultural training, come and speak to health workers to get a feeling for what types of things they talk to the clients about and how to talk to clients." (Pharm11)

"I would just say build the relationships with the staff because that is your foundation for making a difference and to try wherever possible to get out there and be involved in local community events or things because you that you've seen your face becomes recognised and accepted." (Pharm10)

"Get out into the community. Get outside the clinic side of things and put away your biases." (Pharm18)

Others advised being open to new experiences, be patient, and be flexible, and to make the most of the opportunity if it is presented.

"I suppose throw yourself in it and then be flexible and do whatever needs doing and you just get more out of it, working with everyone." (Pharm06)

"Be really open to new experiences and just be really empathetic. This is a different demographic of health. You just have to be really open sympathetic, empathetic and understanding." (Pharm03)

"Just do it. Well you know if you're qualified ...I would tell anyone to do it. I would... if you want to make a difference in health ... I'm so passionate about this, I could start crying. You know when you get to 90 and someone goes to you 'what have you done in your life?' I know that I can sit there and go, 'well I've definitely helped to close the bloody gap'." (Pharm02)

A couple suggested shadowing a pharmacist already in the position and attempting to obtain as much information beforehand as possible would be ideal steps to prepare for the role. It was also recommended to maintain contact with others working in similar roles, particularly if working remotely.

"I would say stay in contact with the other people in the same type of role. I would get in contact with some other remote pharmacies because they often have ideas that you haven't even thought of, or like they've got exactly same problem that you might have and don't really know how to deal with it. I think that's really important. Don't give up because your computer doesn't work for six weeks. It will eventually. It's just how it is. You have just got to work with what you got. That's about it, and they will appreciate you. People appreciate you so much." (Pharm07)

Preferences for the Future

All of the pharmacists who were asked if they would stay on if their role was continued within their health service stated that they would. Overwhelmingly, the most common reasoning for this amongst the pharmacists was the enjoyment they got out of the job and personal and professional satisfaction in the service they were providing.

"Because I mean it's not a job to me. ...well I do come to work to pay the bills but also well if I wanted an easy job, I'd work in a community pharmacy 10 minutes from my home. You have to love what you do, and you have to feel like you make a difference. I feel here you can. There is a spot in Aboriginal health that is lacking. There is a huge medication management hole." (Pharm02)

"I love the job and I love the patient contact and I love solving problems and I love teaching." (Pharm23)

"I think it has made me a better pharmacist. I'm probably a much more understanding person than I was before. And it's just better job satisfaction than dispensing all day." (Pharm03)

"I can see the benefits of having a pharmacist there and I enjoy it. I enjoy, just having a bit more variety in my pharmacist role in a community setting. I can see the benefit for the patient, and I can see that the community have really embraced it. A lot more than I expected." (Pharm14)

"Oh. I'm loving it. I think it's one of the most satisfying [roles], I do love a lot of my jobs that I've been in, but this one I'm in no hurry to go back to doing what I was doing before.... I feel like I'm just starting, I'm not ready to go yet." (Pharm17)

3.1.14 Conclusion

Overall the pharmacists participating in the IPAC project were prepared for their roles and generally positive about their experiences. Participation in project induction and cultural training prepared them well prior to commencement in their local ACCHS. Local induction to the ACCHS and the local Aboriginal community was not provided to all pharmacists and this presented some challenges initially. Pharmacists did not have the opportunity to meet key contacts and were unfamiliar with the local facility and processes.

Many ACCHSs had not had a pharmacist role within their service prior to the project. Some IPAC pharmacists felt that their ACCHS was not ready for their role. . They felt that health service staff did not all understand or value their role.

The majority of pharmacists felt accepted and were able to integrate into the primary health care team by the time of their interview (six months' post commencement), although many were required to educate the staff on the value of their role and activities in which they could contribute. ACCHSs and staff supported the pharmacists through provision of consulting rooms, uniforms, promotion of the role and patient referrals.

The pharmacists felt they had been effective in their roles and described changes in their health services and positive impacts for patients and staff members. Pharmacists reported that patients were feeling better, their management of their conditions had improved, they were more adherent to their medications and their test results had improved, particularly HbA1cs. The IPAC pharmacists completed medication management reviews, provided medicines information to GPs and other staff, facilitated formal education and input into clinical meetings.

Different approaches were used in the recruitment of patients for the IPAC project in the different services. Posters helped raise awareness of the project and aided the pharmacists to be recognised as a member of the team. All pharmacists felt there was a role for a non-dispensing pharmacist within ACCHSs. The IPAC pharmacists were keen to continue in an IPAC-type role and reported personal and professional satisfaction in the holistic services they were providing.

3.2 GP Surveys

3.2.1 Demographics

Thirteen GPs commenced the online survey for the IPAC project, eight males and five females. The median age of participants was 41-50 years (n=4). Three GPs were aged 30 years or under, three were between 51 and 60 years, two were aged 61 years and over, and one was between the age of 31-40 years.

Ten of the GPs worked as clinical practitioners within their service, with three working in combined clinical and management roles. Eleven GPs identified they were working in five different ACCHS. Six of these GPs worked for the one ACCHS.

The length of time GPs had worked within their current ACCHS ranged between 6 months and 12 years, with an average of 3.7 years. GPs worked an average of 36.7 hours per week; with one outlier of 8 hours per week, the range was otherwise 34-50 hours per week. Eight of the thirteen GPs (61.5%) had worked in an ACCHS prior to their current employment, ranging from 6 weeks to 10 years with an average of 2.7 years' prior experience.

3.2.2 Clarity of Roles and Responsibilities

At commencement, GPs reported having an average understanding of the aims of the IPAC project, and the roles and expected activities of IPAC pharmacists. On a rating scale from 1 (not clear) to 5 (very clear), GPs rated their understanding at 2.9 in relation to their understanding of the IPAC project and its aims, and 3.8 in relation to the roles and activities of the IPAC pharmacists.

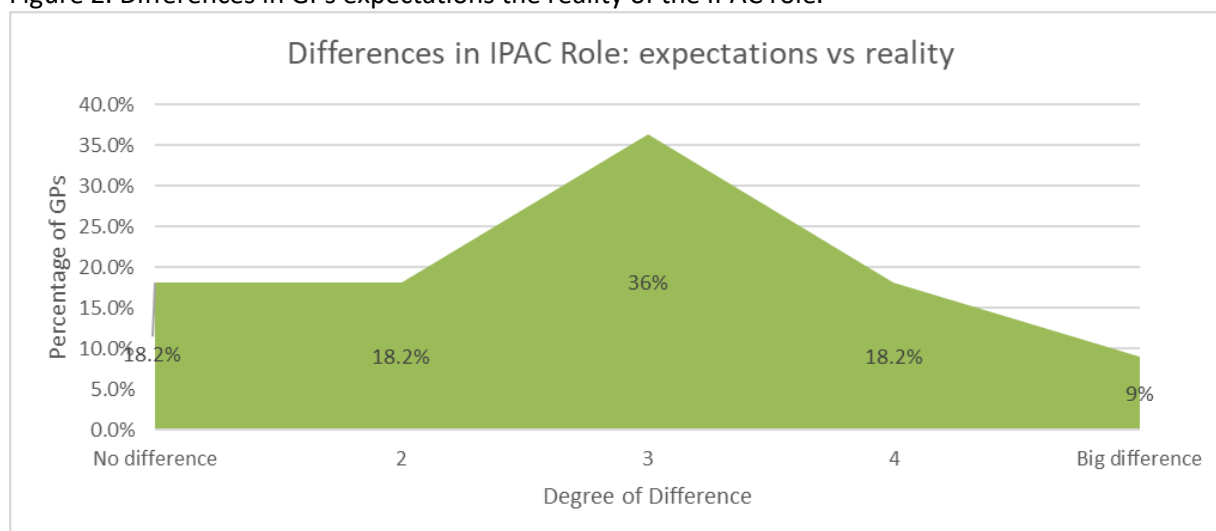
Just over half of the GPs responded that there was a moderate or large difference between what they expected the IPAC pharmacists' role would be, and what it actually was in practice (see Figure 2). The vast majority of the reasons for the differences in expectations described by the GPs were because the IPAC pharmacists' scopes of practice and their involvement in patient care had been far greater than what they had expected.

"I didn't realise it could be so adaptable to the needs of my patient cohort."

"The pharmacist was actually more engaged with clients and took a very strong role in client care, much more than I expected, but very pleasing."

"I had a limited understanding of what IPAC would entail but thought it would mainly be HMRs and medication education to patients which is what it largely is at our practice."

Figure 2. Differences in GPs expectations the reality of the IPAC role.

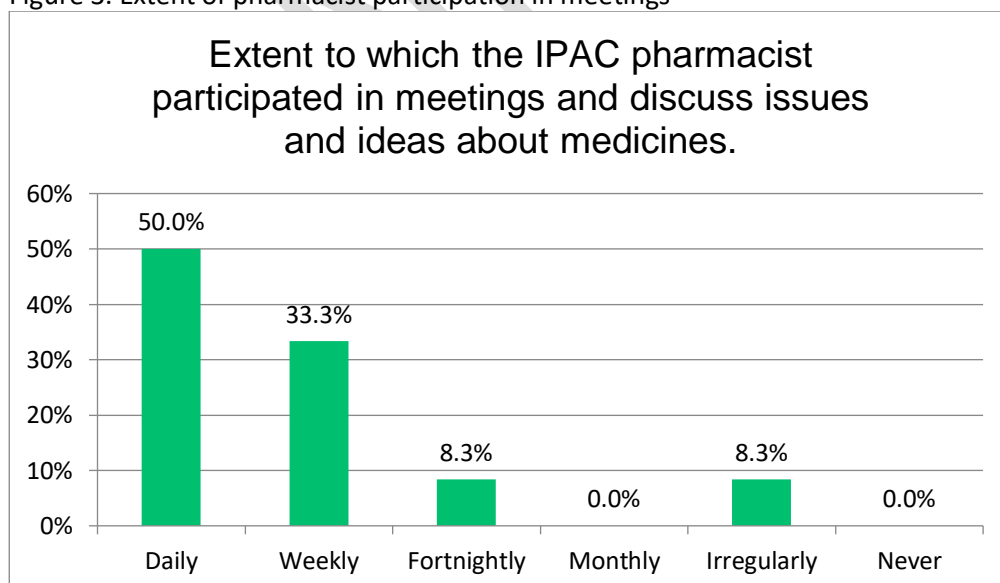


Clarity regarding the difference in roles between the IPAC pharmacists and GPs and nurses in the clinic was clear or very clear to the vast majority of survey respondents. The difference between the roles of the IPAC pharmacist and community pharmacists was also clear to the majority. Using a rating scale of 1 (not clear) to 5 (very clear), GPs rated their clarity about the difference between the role of the IPAC pharmacists' and that of the GPs and nurses an average of 3.8, and between community pharmacists as 3.4 (n=12).

Over half of participants identified 'champions' or leaders within their organisation who facilitated the pharmacists' integration into the primary health care team. The specific role of this individual varied between the different services, and included senior medical officers, clinic coordinators, health workers and even the diabetes educator, *"I observed that our pharmacist travelled with our experienced diabetes educator to communities initially, which I feel oriented her to remote work and living much more quickly"*.

The IPAC pharmacists were reported to be very much involved in meetings and discussions regarding issues and ideas relating to medications (see Figure 3). Fifty percent of the GPs reported this occurred on a daily basis, with a third of the GPs reported it occurring at least weekly.

Figure 3. Extent of pharmacist participation in meetings



The topics of meetings and discussions the IPAC pharmacists were involved in were broad and varied, and included medication safety, Continuing Quality Improvement (CQI) activities regarding compliance and

timely review of medications by staff, involvement in clinic staff meetings, client handovers and chronic disease case conferences, and communicating with stakeholders.

The most useful aspects of the IPAC pharmacists' role described by the twelve GPs covered similar themes in their responses and included counselling and education for patients about their medication use, timely access to the pharmacist's expert advice and knowledge about medications, and facilitating links with the community pharmacists. Comments included:

"The ability to access there and then when client was here. Their ability to look at a broad range of pharmacy issues with experience."

"Excellent one on one with the client and client's family. Good discussions with GPs about medication combinations."

"Ease of accessibility as a clinician. Great source of feedback and link to mediate with the local pharmacists. [IPAC pharmacist] has been a great advocate also for our patients in improving understanding, and access to correct medications, supports with our community pharmacies."

Eight of the GPs also provided comments on barriers they identified that they felt had impacted upon the IPAC pharmacist's ability to fully implement their role. Whilst one pharmacist was described as a "pocket dynamo who broke down any barriers with gusto" and even "carried dog food to feed savage dogs, so she could visit her patients at home". Other barriers identified included individual personality factors related to the GPs and pharmacists "some GPs were a bit stand offish and maybe not willing to listen to a pharmacist", "[the pharmacist] did not integrate well into the clinic... seemed to work outside of scope of practice". Lack of understanding of the pharmacists' role by other members of the clinic team and limited patient numbers were also identified as barriers.

Using a rating scale between 1 (not integrated into team) and 10 (fully integrated into team), the GPs rated the IPAC pharmacists' integration into the primary health care team at average of 8.3 out of 10 (n=12), with nine GPs giving a score of 9 or 10 (out of 10). One GP rate their pharmacists' integration at a one. Comments were not collected from GPs regarding degree of integration.

3.2.3 Relationships and Cultural Appropriateness

The effectiveness of the IPAC pharmacists' communication with patients was rated an average of 8.5 out of 10 (n=11) by the GPs based on their observations, with a score of 1 representing 'not effective' and 10 being 'very effective'. Similarly, using the same rating scale, the pharmacists received an average score of 8.8 out of 10 (n=11) for their ability to develop a rapport with patients. GPs also rated the cultural sensitivity of the pharmacists very highly with an average score of 9.3 out of 10 (n=9). Examples of positive communication and relationships between the pharmacist and their patients were provided:

"There were many examples of disengaged clients who were identified through pharmacist-lead CQI activity as being at risk; the pharmacist proactively engaged with these clients with the guidance and assistance of a local health worker and facilitated their re-engagement with the clinic, thus providing improved follow up and safety for some quite complex medical issues."

"Patients have reported on helpful and positive interactions with [IPAC pharmacist] during her time at [health service]. Becoming a fixed long term role within our clinic I envisage her ability to further nourish the trust patients place on her knowledge, reliability and her willingness to advocate for them. Patients have disclosed information on their medication compliance with [IPAC pharmacist] more readily than they have with myself. Only some of the fruitful examples of her role within our team."

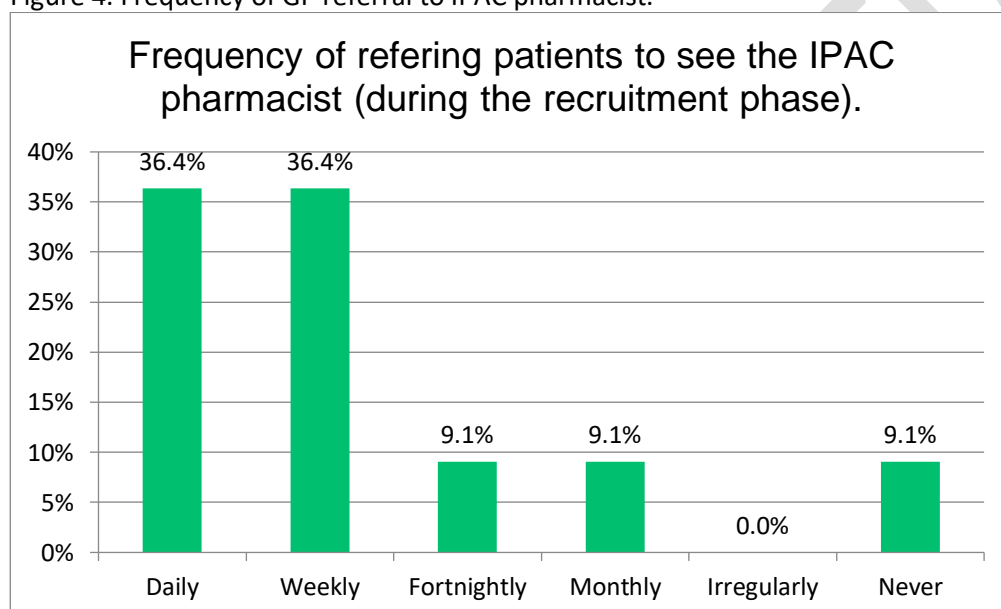
"Patients liked the pharmacist, they were enthusiastic about taking medication after speaking with her."

The willingness of patients to see the pharmacist, and the acceptance of the pharmacists by the patients was also rated very highly, at 8.5 (n=11) and 9.3 (n=9) respectively. One GP observed “[IPAC pharmacist] has participated in all [ACCHS] events, and all cultural celebrations, workshops with great interest and respect. Passionate about improving the health and understanding of all our staff and patients. In my observation, she has always been culturally sensitive in her approach to all patients. A great asset to our team”. Another GP also commented “This project has highlighted a key gap in primary care that community pharmacists don't provide. Integrating pharmacists into the ACCHS model helps address medication safety and complexity, CQI activities and provides a more holistic approach to health care by allowing timely and relevant access that is culturally safe and of course, independent.”

3.2.4 Patient Recruitment Processes

The process for referring patients for enrolment in the IPAC project was rated highly by the GPs, giving an average score of 9.3 out of 10 (n=10), with 7 GPs giving a rating of 10, reflecting that the process was ‘very easy’. The vast majority of GPs reported referring patients to see the IPAC pharmacist, during the recruitment phase of the project, on a daily or weekly basis (n=10) (see Figure 4).

Figure 4. Frequency of GP referral to IPAC pharmacist.



Ten GPs indicated referral processes to the IPAC pharmacist worked well. The most common comment from GPs was the informal referral process to the pharmacist that most had adopted, worked successfully, including direct face-to-face discussion with the pharmacist in the clinic, sending emails, phoning the pharmacist or simple referral letters placed in the pharmacist's in-tray. The availability of the pharmacist to see the patients on the same day as the referral was also reported as enabling the referral process. Conversely, another GP commented that formal bookings with the pharmacist allowed the pharmacist to use their skills most productively. The ability for any clinical staff member, including nursing staff and health workers, to refer patients to the pharmacist was also a positive process, as well as allowing patients to self-refer, with one GP stating “building upon existing internal pathways for HMR referral and strengthening and varying other means of access such as self-referral was a noticeable improvement for us”.

Readiness to refer and influencing factors

Just over half of the GPs reported that they referred all eligible patients for the project. However, there may have been some confusion around this question. GPs actually appeared to interpret the question as “what factors influenced you to refer to the pharmacist”, rather than the GPs “readiness” to refer. For the remaining GPs who answered that they did not always refer eligible patients, the reasons they gave for this included their busy workload in clinics, not wanting to burden patients who were already seeing multiple different providers with additional appointments, and patients who despite meeting the eligibility criteria the GP felt

they would not gain much benefit from seeing the pharmacist due to their good health literacy levels and existing knowledge of their medications.

One GP reported that knowing the IPAC pharmacist position was time-limited was a factor that impacted negatively on the referral process, stating *"I am aware [the pharmacist's position] will only be to end of this year and so that impacts on our decision to refer or not. Out remote if we have a position for one year only, it never really gets traction. So why sign a whole lot of people up to that when then that role just disappears"*.

Comments regarding how the referral process for enrolment could have been improved included timing the pharmacist's arrival with community events to introduce and welcome the pharmacist to the community *"...I feel community being able to put a face to the name and role improves compliance with appointments"*. Ensuring the staff have a good understanding of the pharmacist's role and simplifying the participant information sheet so that it was easier for patients to understand were also noted as areas for improvement.

3.2.5 Consent Processes

Only one GP was aware of there being any patients who had refused to consent to be part of the project. Comments as to what GPs felt had worked well in relation to gaining consent from the patients included the use of the health worker during the consent process and explaining to patients why and how participation in the project could help improve outcomes.

The majority of GPs reported they had not personally consented any of the patients into the IPAC project, this task was mostly left up to the pharmacist. The GPs who provided comments on how the consent process could have been improved suggested the use of an electronic form with yes and no options, and simplifying the consent form for the patients by making it 'less wordy' and easier to understand, while others commented that the consent process was not clear to them, with one GP stating *"awareness of the consent process would have been good."*

3.2.6 Training on Recruitment and Consent Processes

Only three GPs out of 11 reported receiving briefing or training in relation to the IPAC project and the referral and consent processes for enrolling patients into the study. Two of those reported their training had come from the IPAC pharmacist, whilst the third could not recall who had provided their briefing. The effectiveness of this training was scored an average of 8.7 (n=3), with the scores ranging between 7 and 10, with 10 considered as 'very effective' and 1 as 'not effective'.

One GP commented *"I received written information about this project prior to completing this survey, it would have been good to get that information at the beginning of the trial, prior to this, all information I received was verbal and informal, I did not get any training."*

3.2.7 Patient Recruitment

Of eleven GPs who answered the question, two reported that they were aware of health service or system issues that impacted on patient recruitment. The issues described related to the practice software used (specifically Communicare), recruitment of new practitioners after the project had commenced who *"needed to be orientated to the project and the philosophy behind integrated pharmacists"*, and not having all members of staff aware of the pharmacists' role and the potential benefits to patients at the start of the project.

Only one GP reported that there were any local community issues impacting on recruitment, which they attributed to fluctuating numbers of people in the community at any one time due to different cultural commitments.

3.2.8 Working with the IPAC Pharmacist

Over half the GPs (54.6%, n=6) had daily contact with the IPAC pharmacist, with 27.3% (n=3) reporting weekly contact. One GP each reported fortnightly and monthly contact with the pharmacist. Opportunities *"to*

discuss individual patient therapies” and *“ask for information about medicines”* were work processes which had increased the most significantly after the IPAC pharmacist started in the health service; GPs reported a ‘significant increase’ in these two areas with rating of 4.7 each out of 5 where 1 indicating a ‘significant decrease’ and 5 represented a ‘significant increase’ (Table 1).

GPs reported there were no decreases in work processes, however three reported that *“Item 900 claims for a Home Medicines Review”* had remained the same.

Table 1. Extent of change in work processes for GPs following the commencement of the IPAC pharmacist.

Work processes	Average Rating	Total Responses (N)	Don't know or not applicable
Opportunity to discuss individual patient therapies	4.7	10	1
Availability of the IPAC pharmacist for a Home Medicines Review	4.6	10	1
Item 900 claims for a Home Medicines Review	4.0	7	4
Assistance with updating medication lists	4.6	10	1
Opportunity to ask for information about medicines	4.7	10	1
Follow up of medication supply with Community Pharmacy	4.5	10	1

Using a rating scale between 1 and 5 (1 being not at all effective, and 5 being very effective), the GPs rating the IPAC pharmacists’ effectiveness in regard to their ten core roles of the project (see Table 2). Pharmacists’ effectiveness in all roles was rated highly overall, with ratings ranging from 4.3 to 4.8. The two core roles which received the highest rating in terms of the pharmacists’ effectiveness were *“Conducting medication reviews outside the home (non-HMRs)”*, and *“providing patient education”*, in which 10 of the 11 GPs who answered gave the pharmacist a rating of ‘very effective’.

One GP remarked *“the pharmacist performed exceptionally in all regards”*. Another commented that *“Supporting transitional care impacted a little by access to medication charts post discharge from hospital”*, which might explain in part the lower overall rated average of that core role.

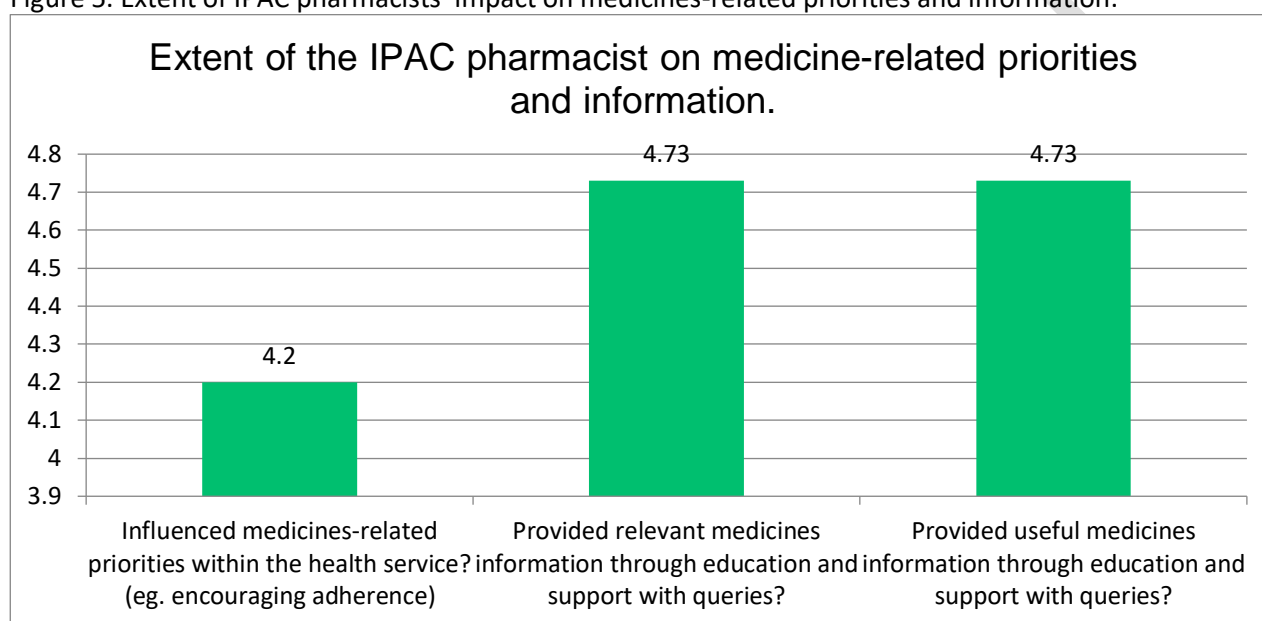
Table 2. GP rating of effectiveness of the IPAC pharmacist role around the ten core roles.

Role	Average Rating	Total Responses	Don't know or not applicable
Conducting Home Medicines Reviews	4.8	8	3
Conducting medication reviews outside the home (non-HMRs)	4.8	11	0
Reviewing the appropriateness of medications and assessing for prescribing omissions	4.7	11	0
Addressing medication adherence issues	4.4	10	0
Participating in team-based meetings/activities	4.6	11	0
Quality assurance with the use of medicines (undertaking drug reviews)	4.6	11	0
Providing patient education	4.8	11	0
Providing staff support and education	4.7	11	0
Further developing relationships with community pharmacists	4.5	10	1

Providing a medicines information service	4.6	11	0
Supporting transitional care (e.g. checking medication list after patient discharge from hospital)	4.3	11	0

GPs were asked to rate the pharmacist on the extent to which they influenced medicines-related priorities within the ACCHS, provided *relevant* medicines information through education and support, and provided *useful* medicines information through education and support, using a scale of 1 (not at all) to 5 (great extent). Overall the pharmacists were rated at 4.7 out of 5 for provision of relevant and useful medicines information (see Figure 5). Of the GPs, 81.8% of (n=9) reported the pharmacists provided relevant and useful medicines information to a 'great extent'.

Figure 5. Extent of IPAC pharmacists' impact on medicines-related priorities and information.



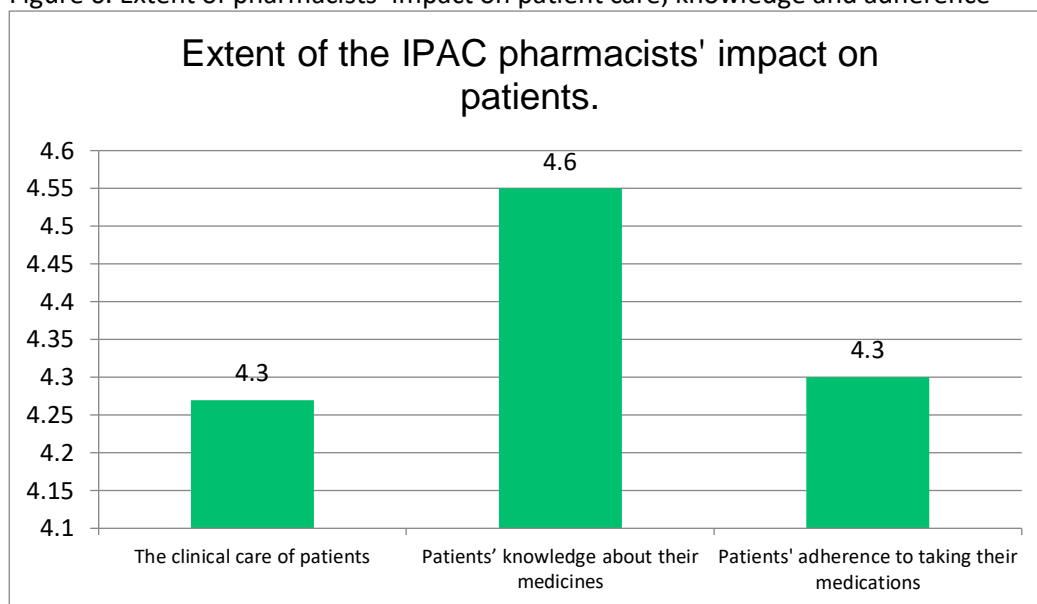
The GPs rated the impact the IPAC pharmacists had on the clinical care of patients, patients' knowledge about their medications, and patients' adherence to taking their medications, again using a scale from 1 (not at all) to 5 (great extent). Sixty-three percent of the respondents reported patients' knowledge about their medications had been impacted to a 'great extent' (average score of 4.6 out of 5). The impact on patients' adherence to their medications, and the overall impact of the pharmacists on the clinical care of patients was also rated highly, with average scores each of 4.3 (see Figure 6).

One GP commented "review of medications has provided opportunities to reduce pill burden and improve understanding mostly for why their medications are required and hence adherence", and another stated "I was quite astounded at how some patients seemed to want to stay in the clinic and spend time with [the pharmacist]".

In the interviews one GP commented:

"Incredibly effective. I think that [the pharmacist] has improved my medication knowledge. It's also improved, I think it has improved communication with the rest of the team. I think a lot of us have been in that situation like a lecture where the lecturer asks the question to everyone sitting there and it's just dead silence until someone starts talking and there's a conversation then all these other people pop up and start communicating as well. I think [IPAC pharmacist] has done that for our team as well. We talk more." (Urban GP)

Figure 6. Extent of pharmacists' impact on patient care, knowledge and adherence



GPs were asked to describe the proportion of their time they felt had been saved by having the IPAC pharmacist assist with managing patients and their medications using a sliding scale from 0% to 100%. The average score given was 21% (n=8) with a wide range provided, between 3% and 41%. One outlier value of 90% was excluded from analysis.

3.2.9 Feedback on Medication Reviews

HMRs and non-HMRs

All GPs (100%, n=11) unanimously reported that the pharmacist had made suggestions regarding changes to patients' medications after undertaking a review, including reviews undertaken both within and outside the home. GPs reported that the IPAC pharmacists' communicated their suggestions using different methods including written reports (81.8%), notes recorded in the patient's records (72.7%), via direct discussion with the GP (90.9%) and/or via case conferences or team meetings (63.4%). The appropriateness of the pharmacists' recommendations was rated using a scale from 1 meaning 'not appropriate' to 10 meaning 'very appropriate'. The average score given to the appropriateness of recommendations was 8.5, with seven of the GPs allocating a score of 9 or 10.

GPs frequently acted on the pharmacists' recommendations. They rated how often they acted on recommendations from 1 (never), to 'always' (10), with an average score of 8.5 (n=10). The scores ranged between 7 and 9.

Eleven GPs identified the actions they took as a result of the recommendations made by the pharmacists (Table 3). The vast majority of GPs reported they would follow-up with the patient opportunistically at their next review (90.9%, n=10), and many also reported they would contact the recall the patient for an appointment (81.8%, n=9), and/or change/update the patient's medication list (81.8%, n=9). Another action identified by one GP was that they updated the community pharmacist. One GP commented that there was no formal HMR program within clinic.

Table 3. Actions taken by GPs following pharmacists' recommendations (n=11).

Actions taken	N (%)
I contacted and recalled patient for appointment	9 (81.8%)
I telephoned the patient to provide information	1 (9.1%)
I sent a letter to the patient to provide information	2 (18.2%)
I visited the patient in their home	1 (9.1%)
I arranged for another health professional to visit the patient at home	4 (36.4%)
I followed-up with the patient opportunistically (next time they presented)	10 (90.9%)
I changed/updated the patients medications list	9 (81.8%)

Assessments for Medication Appropriateness and Potential Omissions

Almost all the GPs responded that the IPAC pharmacist also made suggestions or recommendations as a result of undertaking an assessment of medication appropriateness, or potential omission of medications, with 90.9% (n=10) of respondents answering 'yes'. These ten GPs provided details on follow-up strategies. In 90% of cases the pharmacist would communicate the recommendations directly with the GP, 80% provided a written report, 70% left notes in the patient's record and 60% would communicate their recommendations in case conferences or team meetings.

The appropriateness of the pharmacists' recommendations relating to medication appropriateness and potential omission of medications were rated 8.8, on a scale from 1 (not appropriate) to 10 (very appropriate). Nine out of the 10 GPs (90%) who responded gave a score of 9 or 10. An average score of 8 was given in regard to how often the GPs acted on these recommendations by the IPAC pharmacist, using a scale of 1 (never) to 10 (always).

Overall the GPs felt the recommendations by the IPAC pharmacists were 'good', with one GP commenting *"recommendations were balanced, and evidence based with a thorough understanding of not only the pharmacological reasons behind the changes but a deep understanding of the individual patient factors that influenced their suggested changes."* Others commented on some contextual factors as to why recommendations were not always acted upon:

"Recommendations were valid and acted upon. Even if this was a review of client and discussing matters with them. It isn't always appropriate to change medications even though they may have beneficial effect."

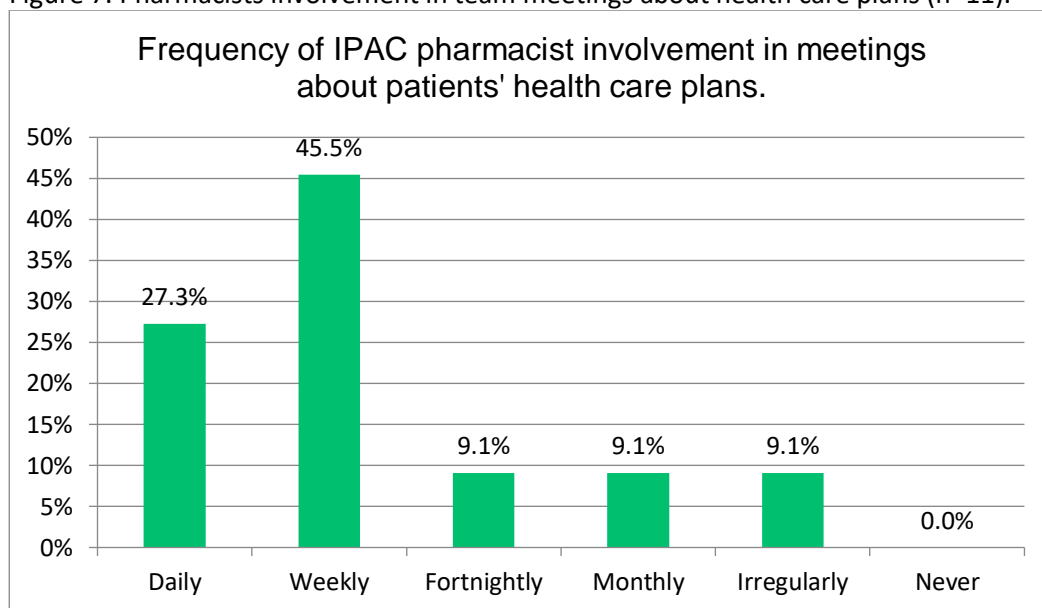
"The recommendations accorded with the evidence however they did not accord with contextual factors relating to the patient. For example, the pharmacist recommended review for a steroid inhaler for a very elderly gentleman who used salbutamol (badly) occasionally for when he felt short of breath. He did not really need the puffer that much and he was in his nineties. Changing medications would have been confusing and inappropriate."

3.2.10 Collaboration

GPs rated the communication between themselves and the IPAC pharmacists at an average of 9, using a rating scale of 1 (not effective) to 10 (very effective) (n=11). Eight of 11 GPs (72.8%) reported the pharmacist was involved in team meetings to discuss patients' health care plans on either a daily or weekly bases (see Figure 7). One GP reported this occurred on a fortnightly and monthly basis respectively, and another reported that this occurred irregularly.

The input pharmacists provided at these meetings was rated very highly with an average score of 9.2 (n=10), with a score of 1 representing 'not valuable' and 10 'highly valuable'. Eight GPs provided a score of 9 or 10, and the remained two gave a score of 8.

Figure 7. Pharmacists involvement in team meetings about health care plans (n=11).

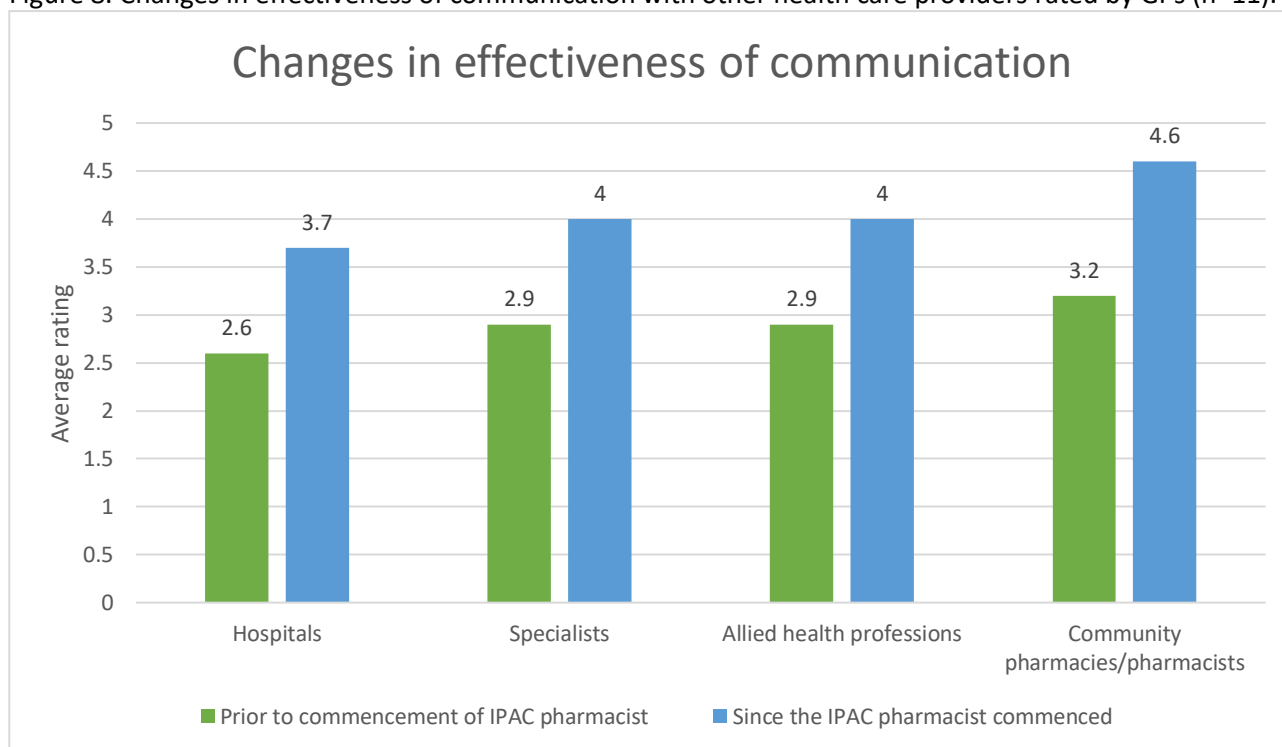


GPs were asked to rate the communication between their health service and hospitals, specialists, allied health professionals and community pharmacies/pharmacists respectively, both prior to and after the commencement of the IPAC pharmacist, using a scale between 1 (not effective) and 5 (very effective). Communication was shown to have improved with all 4 categories of stakeholders after the IPAC pharmacist commenced working in the health service (see Figure 8), with GPs reporting that communication had improved the most with the community pharmacists, scoring this an average of 3.2 prior and 4.6 after the IPAC pharmacist had commenced. GPs commented:

"The lines of communication markedly improved. More formal set up of who can be contacted within our service for medication changes. The community pharmacies all know whom to discuss concerns with if unable to contact relevant GP."

"Improved communication between the state-based health services around medication challenges, not just tertiary hospital and outpatient based but also our local emergency department have improved and processes developed to streamline these information systems."

Figure 8. Changes in effectiveness of communication with other health care providers rated by GPs (n=11).



3.2.11 Effectiveness of the IPAC Role

Ten GPs rated the extent to which they were able to fully utilise the IPAC pharmacists' skills and expertise on a scale of 1 (not utilised at all) to 10 (fully utilised). The average rating given was 8 out of 10, with a range from 6 to 9.

GPs reported a very high degree of confidence in the IPAC pharmacists' professional capabilities. Rating them on a scale of 1 (low confidence) to 10 (high confidence), the average rating was 9.1 (n=11). Eight GPs provided a score of 10 (out of 10). However, one GP rated their confidence in their pharmacist at a 3, resulting in a range of scores between 3 and 10. This GP stated:

"I had difficulty with the role. Initially one of my patients was told to come and see me so that I could prescribe some "supplements". I wasn't happy with this and had a chat with the pharmacist about not doing this. I thought I did this politely but the pharmacist did not appear to take it well and then stopped consulting me about patients. This then resulted in a patient becoming very unwell with acute renal failure. The pharmacist did not notice that the patient was becoming unwell. I realise this was outside her scope of care but her presence gave me the impression that the patient was being well reviewed. This turned out to be incorrect. I think if roles are more clearly defined this could have been avoided."

Overall, the GPs rated the effectiveness of the IPAC pharmacist role at 8.6 out of 10, with a range from 4 to 10 (n=11) on a scale of 1 (not effective) to 10 (very effective). Eight of the GPs gave a score of 9 or 10. Comments from GPs included:

"I see this as an invaluable addition to our team that I would hope could extend into the future. There are tangible improvements to our service with their integration that would be sorely missed should this project not lead to ongoing funding. It is a recognition of the complexity of ACCHS-based care and the multitude of challenges medications in a remote setting provide. Having an integrated pharmacist as opposed to relying on hospital-based or community pharmacists means you are obtaining relevant and contextually nuanced advice for your patients, an advocate to communicate with those external pharmacists to expedite communication and improve accuracy of medication records, prescribing and dispensing."

"Great concept, I'm very hopeful [health service] can retain the skills and support provided by [IPAC pharmacist]. She is an invaluable part of our clinical team and markedly improves the quality of care provided to our patients."

3.2.12 Project in General

Ten GPs rated overall how well they felt the IPAC project was implemented using a scale between 1 (not well at all) and 10 (very well). The average rating was 8.4, with a range between 4 and 10. Using the same scale, GPs rated how well the IPAC pharmacist role met the requirements of the ACCHS, with an average score of 9.6 (n=8). Aspects of the project that worked well included:

"To my mind all aspects have worked well."

"The presence of a readily accessible pharmacist has been invaluable."

"Pharmacist's ability to engage with patients."

"I did appreciate the evidence that was presented, and the review of medications however given that the pharmacist did not want to talk to me and went through the senior medical officer most of the time, I did not really get the full benefit of this."

Several GPs also provided comments on some of the challenges experienced in implementing the IPAC project:

"Late start to the program meant less time to experience the benefits overall."

"Getting staff to first understand the role and how to refer, also appreciate the benefit of a pharmacist on site for our patients and clinical staff."

"Remoteness, changing of all staff"

"Enrolling an adequate number of patients in the project."

The GPs were mostly unsure how much support their health service received from their State or Territory NACCHO Affiliate in relation to the implementation of the project, with 5 of the 9 GPs who answered responding 'not applicable or don't know'. The remainder of the GPs reported that a small amount of support was provided, with an average of 2.5 out of 5 on a scale from 1 (none at all) to 5 (a great deal).

GPs reported their service had also participated in other initiatives that may have impacted on the work of the IPAC pharmacist (60%, n=10). Four of these GPs indicated that their service had been involved with the Health Care Homes (HCH) initiative. However, one GP further stated *"Health Care Homes overlaps to some degree with community pharmacies. In saying that I feel the IPAC pharmacist has had a greater role in education of clients and staff. I do not believe the role has been diminished by the HCH model. To me they are a separate demographic at times"*.

3.2.13 Future

All GPs but one answered that they would like the IPAC pharmacist role to continue in their ACCHS beyond the conclusion of the project, and also felt there is a role for an IPAC-type pharmacist within ACCHS in the future (90.9% n=10). The single GP who answered 'no' for both questions provided the following reason for their answers *"There was no trust developed between the clinical staff and the pharmacist. Having too many people involved in a patient's care can also be problematic. If roles were clearer and the pharmacist received more appropriate cultural training it might be really helpful"*.

The remaining comments were very positive. Comments provided by the GPs supported the IPAC pharmacist role in their health service and in ACCHSs in general, beyond the completion of the project:

“Hard to imagine this place without our IPAC pharmacist, it has been helpful for clinicians like myself and patients in equal measure and the whole clinical team really appreciates their work.”

“Provides a culturally safe place for access to experience of medications for staff and clients.”

“Very helpful resource to improve patient outcomes.”

“Important part of a fully integrated team. Great link between patients, clinicians and community teams also, in my opinion another important piece to improving the quality of care and minimising harm to our patients.”

The majority of the GPs felt that their health service required the professional services of an IPAC-type pharmacist on a full-time basis, with 7 out of 10 GPs stating it was required 5 days per week, with a range from 2 to 5 days per week.

Eight GPs responded that they did not believe there were any changes required to the IPAC role, and 3 others responded that changes to the role were required, providing comments that it needed to be *“expanded to cover a greater core of clients”* and should include help with pharmacy ordering for the clinic, whilst one remarked *“make it a permanent funded fixture, and create an MBS item for the work attended i.e. time based”*.

Whilst one GP in their final comments questioned *“I would be interested to know if you considered the potential negative impacts of this study before it was implemented”*, the remaining final comments were very positive:

“Really keen to see this role become a fixed part of the ACCHSs space. Scope of practice is wide and varied, and in the short time of the project yet to be fully utilised or appreciated. Thank you for allowing us to be a part of the project and for the benefit it has provided our community in such a short time frame.”

“It has been a great experience to see this role integrated into AMS functions. It has delivered positive results both which are able to be quantified by data and by the general vibe of clients and staff.”

3.2.14 Overall Findings

Overwhelmingly nearly all GPs who participated in the online survey supported the continuation of the IPAC pharmacist role in their health services beyond the project. Some GPs responded that there was a moderate or large difference between what they expected the IPAC pharmacists' role would be, and were pleasantly surprised that the IPAC pharmacists' scopes of practice and their involvement in patient care was far greater than what they had expected. The IPAC pharmacists had integrated well into the primary health care team and were involved in clinical meetings and staff education. GPs identified benefits for both patients and health service staff. The IPAC pharmacists saved the GPs time by responding quickly to medication queries and undertaking education with patients. They provided quality assessments of patients' medications through medication reviews and appropriateness audits. The uptake of recommendations from reviews was high. GPs reported patients' knowledge about their medications had improved as had adherence to their medications.

GPs referred eligible patients to see the IPAC pharmacists and commented that simple referral processes in their service worked well. Only a few GPs had received training about the project and referral processes. There was some reluctance to refer some patients who had good health literacy levels and existing knowledge of their medications or patients already busy with multiple appointments. Other challenges were the busy workload in clinics and knowing the IPAC pharmacist position was time-limited.

Communication with external agencies had improved since the commencement of the IPAC pharmacist, particularly with community pharmacists. The majority of GPs felt that there was a role for an IPAC-type pharmacist role in their health service and more broadly within ACCHS in the future.

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3.3 Health Service Manager Surveys

3.3.1 Demographic Characteristics

Twelve managers (two males and ten females) completed the online survey. Just under half of the participants (n=5) were between 51 and 60 years of age, three were 31-40 years old, two were 41-50 years old, and one each were 30 years or younger, and aged over 61 years. Managers represented eight of the participating ACCHSs. Two respondents did not identify the health service in which they worked.

Three practice managers, two CEOs and two senior medical officers / clinical directors responded to the survey. The remainder of respondents held other managerial positions within the health services. Managers had spent varied lengths of time within the health service, ranging from 1 to 12 years, with an average of 4.5 years. Managers worked an average of 39.4 hours per week.

Over half of the managers (58.3%, n=7) had worked in another ACCHS previously. The length of experience working in ACCHSs previously ranged from 2 to 12 years with an average of 7.1 years.

3.3.2 Clarity of Roles and Relationships

At the commencement of the project, managers' reported having a good understanding of the aims of the IPAC project, and the roles and expected activities of IPAC pharmacists. On a rating scale from 1 (not clear) to 5 (very clear), managers rated their understanding at 4.0 in relation to their understanding of the IPAC project and its aims, and 3.6 regarding the roles and activities of the IPAC pharmacists. Only a few managers provided comments. One manager stated that there was, *"lots of potential for different areas of role depending on pharmacist strengths and interests."* However, another manager stated there was a *"lack of clarity around what the service is responsible for, and we don't manage the pharmacists so cannot have any say over the role and long hours etc."*

There were a range of changes and improvements that managers were hoping to achieve through participating in the IPAC project. The most common changes identified were education for staff and patients and improved patient outcomes. Other expected benefits for participation in the project included improved communication about medications and relationships with patients, improving compliance and access to medication reviews and improved quality use of medicines. One manager stated they were hoping to achieve, *"Improved medication prescribing, improved patient understanding, improved patient medication compliance, improved health outcomes. Ultimately hoping to prove that every ACCHS needs a resident pharmacist."*

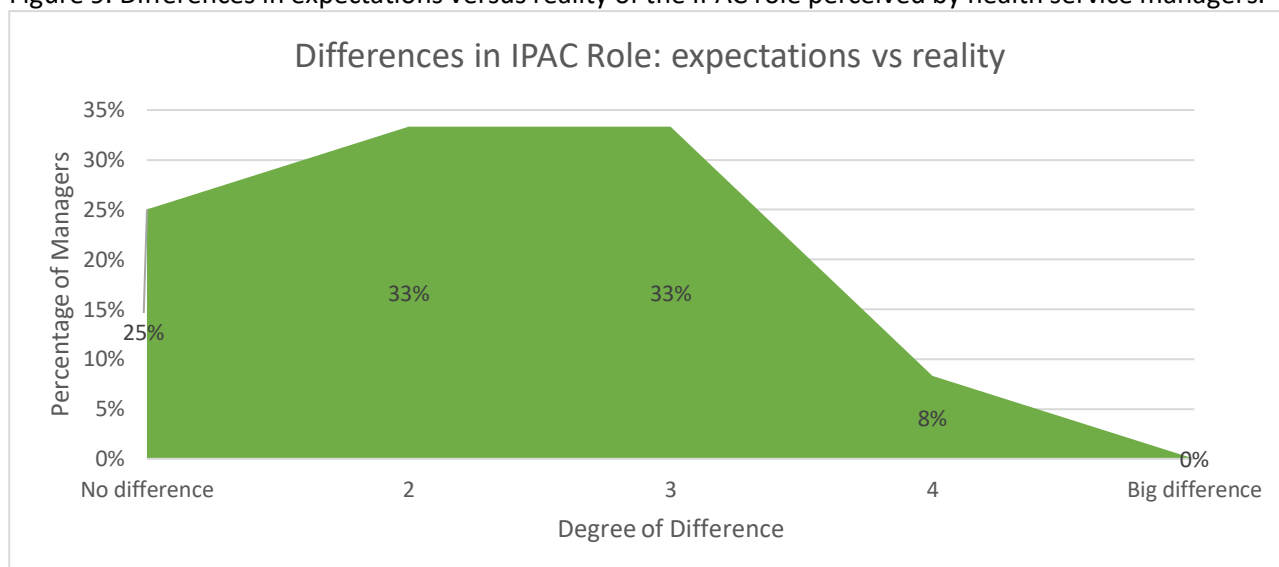
From the interviews with managers, expectations of participating in the project were described as follows:

"It's about seeing whether it's sustainable to be able to have a pharmacist that's going to add value to our service and what the outcomes are with the patients to see if there is something that we could add in if it was possible or if funding's available."

"The main reason was the opportunity for clients to understand their medicines better and to be supported in adherence which is a very complex area in any population. And of course, when you've got a lot of chronic complex illness, medicines sometimes seem like the only thing, so we were cautious in that, in that if we have, if we focused on pharmacists are we just saying take your pills and nothing else. And so ... that's one question we asked really early about the role and were reassured that that was very much in the context of all the changes that people can make."

The majority of managers reported that there was generally no difference in role of the IPAC pharmacists in reality to what was expected (see Figure 9). One manager stated differences had been positive and the IPAC pharmacist had *"achieved these things and more"* while another reported there was, *"much improved communications between community pharmacies and the service; far better knowledge transfer from pharmacists to staff; ongoing improvement in relationships with hospital pharmacists."*

Figure 9. Differences in expectations versus reality of the IPAC role perceived by health service managers.



Over half of the managers' (n=8) reported being clear or very clear on the roles of the IPAC pharmacist in comparison to the roles of GPs and nurses within the service. Managers were also clear on the IPAC role in comparison to that of community pharmacists. On a rating scale from 1 (not clear) to 5 (very clear), managers rated the clarity of roles highly at 4.0 in relation to both groups. One manager stated, *"interestingly the health workers really responded to the pharmacists, for a few reasons; one, they asked what health workers wanted to know, and two, they explained things really clearly and demonstrated (e.g. puffer technique). Skills transfer has been great."* However, initially a few managers reported some staff were not clear on the distinction between the roles:

"I think this role requires clarity especially for the nursing staff to understand the role and responsibility of the pharmacist."

"Very little clarity at the start, and as stated before, we don't manage the pharmacist so difficult to make changes."

Managers rated the communication of the pharmacist with them about their role on a rating scale from 1 (not clear) to 10 (very clear). The average was 8.6 with responses ranging from 6 to 10.

3.3.3 Integration in the Primary Health Care Team

The majority of managers (85%, n=8) reported that there was a champion or leader who facilitated the IPAC pharmacists' integration into the primary health care team. Three managers reported that other managers were the leaders and another three reported Aboriginal Health Workers or Practitioners were key in assisting the IPAC pharmacist integrate into the primary health care team. Another manager stated it was themselves, *"I ensured they were introduced to staff, got them added to our electronic record and did a business case to get them laptops, kept up regular troubleshooting/improvement meeting times. The clinic managers were also very supportive with flexible days of work and home visit support."*

Other support was provided by the health service to assist the IPAC pharmacist (see Table 4). All managers reported that a room or space was allocated for the IPAC pharmacist and that they were promoted in the ACCHSs newsletter or through social media. Only 60% of managers reported providing the pharmacist with an ACCHS uniform.

Table 4. Support provided by the health service (n=10).

Type of support	N (%)
Allocated a room or space	10 (100.0%)
Uniform provided	6 (60.0%)
Promoted in newsletter and/or other media	10 (100.0%)

Five managers outlined other strategies implemented to support the IPAC pharmacist. This was predominantly involvement in staff or clinic meetings, and allocation of staff to support their work. One manager stated, *“Health Workers were allocated to the pharmacist to conduct home visits. Staff was allocated to assist the pharmacist with recalls.”*

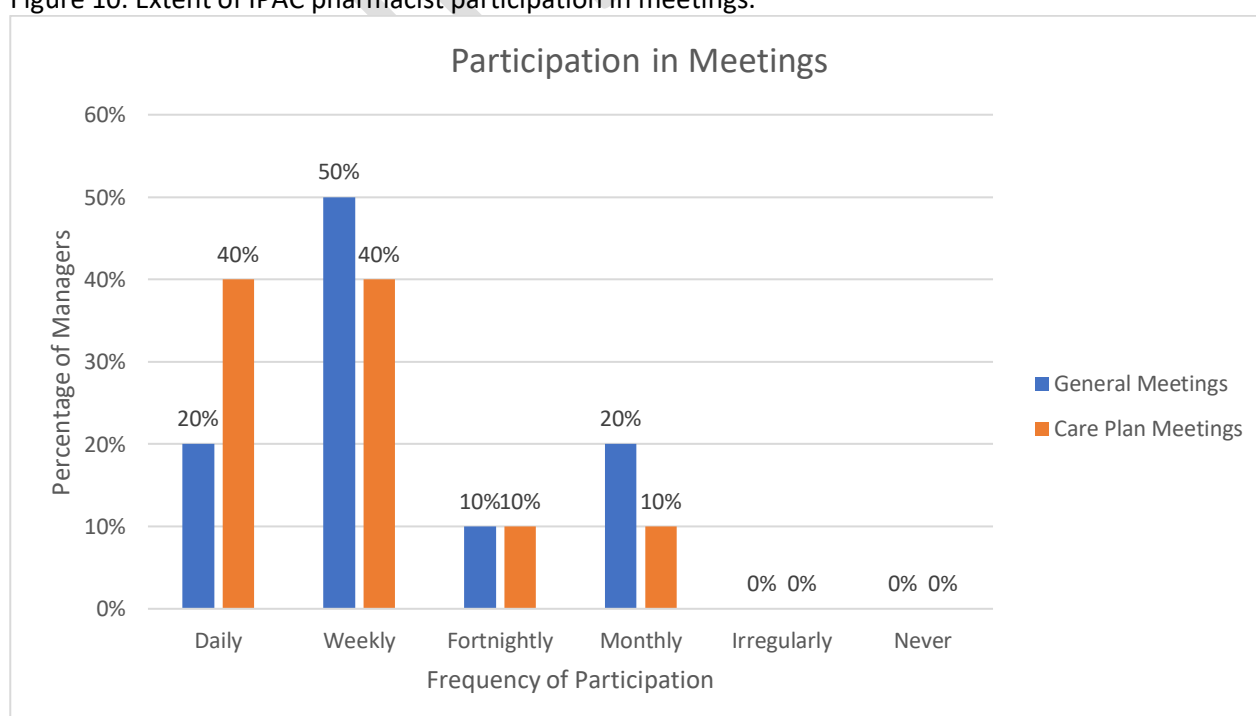
All respondents (100%, n=10) confirmed Aboriginal Health Practitioners or other staff members at their service supported the IPAC pharmacists. It was reported by one manager that, *“This worked well. The AHP was able to provide communication between the pharmacist and the clients to build a rapport with community people. The AHP was able to provide information and instructions in the local language.”*

Managers reported the IPAC pharmacists were regularly involved in meetings (see Figure 10). At half of the services participation in meetings was weekly (50%, n=5) and at two services participation was daily. Topics covered in meetings included referral processes and staff education on *“Interactions of medications, proper use of inhalers and strategies to increase compliance”* and *“puffer technique, CTG, Webster Paks, QUMAX, they also asked what staff wanted to know about which was great.”*

IPAC pharmacists were also involved in discussions with other health care team members to talk specifically about patient care plans and case conferencing. For 40% of services discussions about care plans or case conferencing happened daily (n=4) and for another 40% of services participation occurred weekly (40%, n=4).

The majority of managers felt the input provided by the IPAC pharmacists was valuable with an average rating of 9.2 out of 10 (1 being not valuable and 10 being very valuable). Responses ranged from 7 to 10.

Figure 10. Extent of IPAC pharmacist participation in meetings.



At the time of the survey (approx. six months after the IPAC pharmacists commenced), managers were overwhelmingly positive about having the IPAC pharmacist in their service and reported that their staff felt similarly. Comments included:

"So valuable and an important part of the team, it completes our health service team. It allows us to cover all areas of the services we provide to community as well as within the service and provided important information to staff about their client's they are working with."

"It is an awesome start but eventually there needs to be a pharmacist attached to every ACCHS in Australia."

"Overall a positive experience, it has been useful people having a good understanding of their medication, [IPAC pharmacist] is hard working and I think with some changes at the start of the project and if we had the ability to be more involved this would have helped the project run smoother in our region."

Managers rated the IPAC pharmacists' communication with other staff members highly at 8.6 out of 10, where 10 was very effective. Managers identified that there had been workload changes for other staff since the IPAC pharmacist started.

On a rating scale from 1 (not integrated into team) to 10 (fully integrated into team), eight managers rated the IPAC pharmacists' integration into the primary health care team highly with an average of 8.9 out of 10 (n=8). Six of the eight managers rated the IPAC pharmacists' integration at a 9 or 10 (out of 10).

3.3.4 Beneficial Aspects and Challenges

Ten managers identified the most useful aspects of the IPAC pharmacist role were the provision of medication reviews (including HMRs), education for patients and staff, following up patients and improving compliance, improving relationships with stakeholders, and having access to a medicines expert. Comments from managers described the useful aspects of the role as:

"expertise in understanding pharmacy challenges, advocacy for community with local pharmacies, time devoted to community and follow up as needed."

"Team based collaboration, how approachable the IPAC pharmacist was, the education sessions provided, medication management reviews."

Assistance with explanations to patients about their medications and also their knowledge transfer to AHWs and AHPs."

During the site visits one manager stated that the IPAC pharmacist had been instrumental in data recovery after an IT crash:

"I think when we had a few data issues at the start of the year she was like Jesus when it came trying to sort out the medications, current medications and that sort of stuff and helping out the GPs in that instance."

Nine of the managers also identified challenges that impacted upon the IPAC pharmacists' role. While one manager stated, *"only our imaginations!!!"* other challenges included space, information technology, lack of cultural awareness training locally, pharmacist was not HMR accredited, recognizing the value the pharmacist could bring, pharmacists' expectations of the service and language issues. The workload associated with recording data for the evaluation and lack of clarity in relation to expectations of the project were also issues. Comments from the managers included:

"New concept, different for community to have a pharmacist interested in them when that engagement happens over the counter without privacy and/or with low health literacy."

"Lack of [pharmacists'] confidence when travelling distances to communities, not willing to drive herself. Increased paperwork and working extreme increased working hours that we don't have any management over for self-care. Lack of clarity at the start of the project meant we were unsure of who was responsible for what, meaning we were not 100% sure how the project would work. We were not involved in recruitment."

"Building rapport with clients and engage more with community such as not contacting clients directly instead send letters. Expecting the clinical staff and GPs to take clients to her when finished consultation instead of monitoring the appointment book."

3.3.5 Cultural appropriateness and relationships

Nearly all managers reported that a local cultural induction was available for the IPAC pharmacist (90%, n=9). Cultural induction was generally provided by service staff usually the cultural liaison officers or Aboriginal Health Practitioners. At a couple of services, the IPAC pharmacist visited a culturally significant area or group. One manager reported, *"[IPAC Pharmacist] had participated in the cultural day here at [the ACCHS] and went out with new workers on country and experienced the traditions and what happens with community."*

Ninety percent of managers also reported that a local cultural mentor or person was available to support the work of the IPAC pharmacist (n=9). They reported that this process worked very well and they were generally staff members. One manager noted, *"they always had access to health workers and Indigenous managers"* and another commented that it worked, *"very well - but it was really a team approach and the pharmacist was an open and receptive person who was instantly greatly liked by the staff and the community."*

Managers rated the cultural sensitivity of pharmacists at an average of 9.3 on a scale of 1 (not sensitive at all) to 10 (very sensitive) (n=9). Eight of the nine managers rated their pharmacist as a 9 or 10 on the scale. One manager commented, *"[IPAC pharmacist] works really well with community and staff to provide culturally appropriate care."*

Based on their observations, managers rated the IPAC pharmacists' communication and ability to develop rapport and trusting relationships highly at 9.1 and 8.8 respectively (see Table 5). However, they rated the willingness of patients to see the pharmacist lower at 7.4, and acceptance of the pharmacist by patients at 7.6. This indicates there was still some resistance from patients. Although the average rating for managers personally recommending others to see the pharmacist was 8.2. Results for this question had a larger range, with one manager not making recommendations very often with a rating of 3. Four managers reported making recommendations to others encouraging them to see the pharmacist very often with a rating of 10.

Table 5. Manager's observations of relationship building.

Criteria	Scale of 1 (lowest) to 10 (highest) measuring...	Average	Range	Number of respondents
Communication with patients	effectiveness	9.1	6-10	9
Developing rapport (trusting relationships) with patients	effectiveness	8.8	6-10	10
Willingness of patients to see the IPAC pharmacist	willingness	7.4	6-10	9
Acceptance of the IPAC pharmacist by patients	acceptance	7.6	6-10	8
Personally recommend patients, family or friends to see the IPAC pharmacist	frequency	8.2	3-10	9

Examples of positive communication or relationships were described by the health service managers. These are presented in Figure 11.

Figure 11. Examples of positive communication or relationships.

<p>"One of our older doctors noted a wonderful outcome of our pharmacists liaising with hospital community pharmacy and us to get constantly changing discharge medications and communication for a patient with malignant hypertension correct"</p>	<p>"Patients were ringing to book with the IPAC pharmacist without needing recall and happy to engage on every visit."</p>
	<p>"The Pharmacist has been able to change some quite non-compliant patients to compliant patients with clear communication, rapport, and technical prowess."</p>

3.3.6 Recruitment and Consent

On a rating scale from 1 (very difficult) to 10 (very easy), managers rated the referral and consent process just above average with a rating of 6.3. Responses ranged from 2 to 10. Managers reported that various roles were involved in both the recruitment and referring of patients, and also in obtaining formal consent, including signing the consent form (see Table 6).

Patients were referred by GPs at nine services, nurses at eight services, and at seven services by Aboriginal and/or Torres Strait Islander Health Practitioners. The IPAC pharmacist was also able to approach patients at seven services.

Table 6. Roles who were involved in recruiting or referring patients, or consenting patients (including signing the form) for the project (n=10).

Role *	Recruited or Referred N (%)	Consented N (%)
IPAC Pharmacist	7 (70%)	9 (90%)
Reception staff	2 (20%)	0 (0%)
GPs	9 (90%)	3 (30%)
Nurses	8 (80%)	5 (50%)
Aboriginal and/or Torres Strait Islander Health Practitioners	7 (70%)	5 (50%)
Liaison officers	0 (0%)	0 (0%)
Other ACCHS staff members	1 (10%)	0 (0%)
Specialists	2 (20%)	0 (0%)
Allied Health professionals (community-based)	2 (20%)	0 (0%)
Other (please specify)	0 (0%)	0 (0%)

* multiple options could be selected.

The managers reported that, *“Clients accepted the recommendations of the clinicians”* and another said the process that worked was, *“Referral from many sources, consent by pharmacist.”* At another service the process was described, *“The pharmacists developed a referral info letter very early which not only educated people about the service but ensured they knew the process and what their own role was (looking at all meds including OTC [over the counter] ones).”*

Responses identifying areas for improvement in relation to referral or consent processes focused on the consent and the need for shorter, simplified consent processes. Feedback included *“less paperwork,” “maybe shorter forms”* and *“it needs to be less wordy.”* One manager also commented, *“seems [the IPAC pharmacist] was spending very extended hours doing paperwork and working far more than she was paid for, potentially the referral process was difficult for her to keep up with?”*

Some managers were aware that some patients were not referred for participation in the IPAC project (40%, n=4). The main reasons identified was that these patients did not come in to the health centre or that they had refused to see the pharmacist. Managers commented, *“these were clients who do not come in to the health centre.”*

One manager interviewed during a site visit said that some patients are not particularly engaged and don't want to be, *“Yeah they come in, just want to come in, get their script and get out the door.”*

Managers from only two sites reported that patients who had been referred for participation in the project then refused to consent. One manager noted, *“they refused; they pharmacists were able to put pop up notes in each eligible patients' notes (e.g. if on a lot of medications). Some patients felt this meant the service thought they were not up to managing their own meds; sometimes when the purpose was explained better, they then consented, but not all did.”*

Three managers (30%) identified local service or systems issues within the ACCHS that impacted on patient recruitment for the IPAC project. Issues included participation in Health Care Homes, not utilising the quality assurance system until towards the end of the project (using PenCAT to assist identify patients) and challenges in completing the consent process in a busy clinic.

The majority of services did not report any local community issues that may have impacted on patient recruitment for the project (90%, n=9). The manager at one service identified *“sorry business”* as a local issue that impacted patient recruitment.

Seventy percent of the managers (n=7) reported receiving training around the recruitment and consent process. This was provided by the IPAC staff (from NACCHO or the PSA). Five managers rated the effectiveness of this training at an average of 8.4 out of 10 (10 being very effective). Responses ranges from 8 to 10.

Final comments were made by managers of five services on the recruitment and consent process noting the positive outcomes and areas for improvement. Positive comments included that the process was *'straight-forward'* and *"In the end I believe we obtained the right fit for this organisation."* One area for improvement was suggested, *"maybe an overall training process for all staff involved."*

3.3.7 Impact of having an IPAC pharmacist in the service

The majority of managers had weekly (40%, n=4) or daily (30%, n=3) contact with the IPAC pharmacist. Two managers reported contact monthly (20%) and one on a fortnightly basis (10%). Overall managers felt that there had been a significant increase in some work processes (see Table 7). Work processes that had increased most significantly were the *"opportunity to ask for information about medicines"* rated at an average of 4.9, and *"assistance with updating medication lists"* rated at 4.8, out of 5 (on a rating scale where 1 indicated decreased significantly, to 5 = increased significantly).

Table 7. Extent of change in work processes following the commencement of the IPAC pharmacist.

Work processes	Average Rating	Total Responses (N)	Don't know or not applicable
Opportunity to discuss individual patient therapies	4.6	10	0
Availability of the IPAC pharmacist for a Home Medicines Review	3.9	9	1
Item 900 claims for a Home Medicines Review	3.4	8	2
Assistance with updating medication lists	4.8	10	0
Opportunity to ask for information about medicines	4.9	10	0
Follow up of medication supply with Community Pharmacy	4.7	9	1

Managers rated the IPAC pharmacists' effectiveness around the ten core roles on a rating scale from 1 (not effective at all) to 5 (very effective) (see Table 8). The managers who responded rated the IPAC pharmacists' effectiveness highly in all roles with ratings from 4.2 to 4.9 out of 5. Aspects rating 4.9 included: reviewing the appropriateness of medications and assessing for prescribing omissions; addressing medication adherence issues; quality assurance with the use of medicines (undertaking drug reviews); and providing patient education.

Only a few comments were made which may explain the respondents selecting 'don't know or not applicable'. Comments included *'the limitation was that the HMRs could not be billed by GPs to the MBS'* and *"IPAC Pharmacist not yet a credentialed HMR Pharmacist."*

One manager stated, *"they were simply wonderful."*

Table 8. Effectiveness of the IPAC pharmacist role around the ten core roles

Role	Average Rating	Total Responses (N)	Don't know or not applicable
Conducting Home Medicines Reviews	4.3	7	2
Conducting medication reviews outside the home (non-HMRs)	4.2	9	1
Reviewing the appropriateness of medications and assessing for prescribing omissions	4.9	10	0
Addressing medication adherence issues	4.9	10	0
Participating in team-based meetings/activities	4.5	10	0
Quality assurance with the use of medicines (undertaking drug reviews)	4.9	9	1
Providing patient education	4.9	10	0
Providing staff support and education	4.6	10	0
Further developing relationships with community pharmacists	4.8	8	1
Providing a medicines information service	4.4	9	1
Supporting transitional care (e.g. checking medication list after patient discharge from hospital)	4.6	9	1

3.3.8 Influence in the Health Service

Managers rated the extent of influence the IPAC pharmacist had in particular areas within their health service on a scale of 1 (not at all) to 5 (great extent). All managers (100%) rated their pharmacists at a 4 or 5 out of 5 (see Table 9). The IPAC pharmacists influenced medicines-related priorities with the health service, communication processes between health staff, regarding patients' medication or treatment and positive clinical care outcomes for patients.

Table 9. Extent of influence the IPAC pharmacist had (n=10).

Area	Average Rating
Medicines-related priorities with the health service (e.g. encouraging adherence)	4.4
Positive clinical care outcomes for patients	4.4
Communication processes between health staff, regarding patients' medication or treatment	4.5

One manager commented *"a lot depends on the pharmacist and their willingness to get involved and active"* whilst another commented, *"they were quiet achievers in this area. Both had different strengths; for example, one had fantastic input into our quality use of medicines policy (with a nurse and a doctor this was completely overhauled) the other dealt with updating the templates they designed into Communicare."*

3.3.9 Influence with Patients

Managers also rated the extent of influence they thought the IPAC pharmacist had had in relation to their effect on patients on a scale of 1 (not at all) to 5 (great extent). Managers felt that the pharmacists had a great impact on patients' knowledge about their medication and also their adherence to taking their medications and gave a rating of 4.1 out of 5 (see Table 10). They also rated the patients' confidence to ask more questions about their medicines at 4.0 out of 5. One manager commented, *"the diabetic patient support group at [the] clinic invite the pharmacist regularly to speak to them; they call her the 'Medicine Woman' and are loud in her praises!"*

Table 10. Managers perceptions of patients' knowledge, adherence and confidence (n=10).

Area	Average rating
Knowledge about the role of an IPAC pharmacist	3.7
Knowledge about their medicines	4.1
Adherence to taking their medications	4.1
Confidence to ask more questions about their medicines	4.0

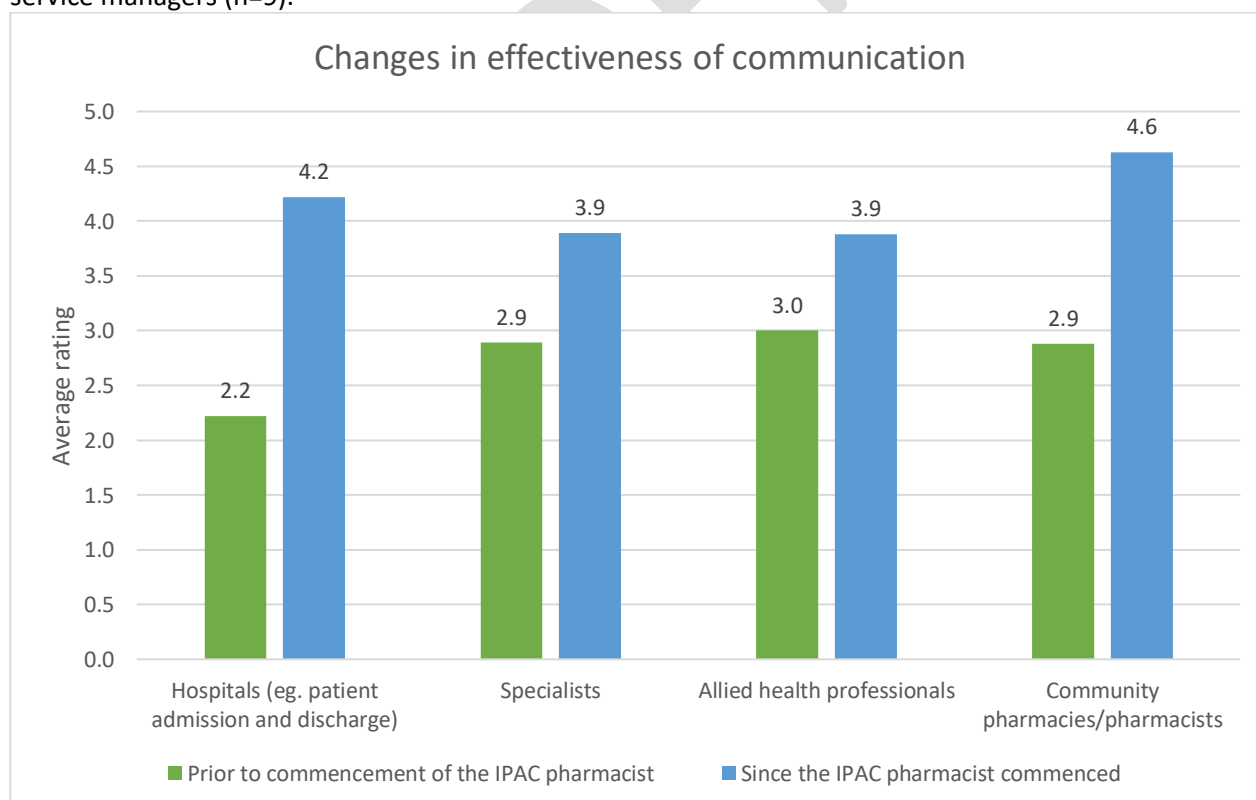
3.3.10 Collaboration with Key Health Care Stakeholders

Managers rated the effectiveness of collaboration with other health care agencies prior to, and following the commencement of the IPAC pharmacist on a rating scale from 1 (not effective at all) to 5 (very effective). Overall managers reported the effectiveness of communication had improved with all health care agencies since the IPAC pharmacist had commenced (see Figure 12).

One manager said, *"More structured channels of communication have been put into place"* and another stated, *"[The IPAC pharmacist] has helped to be the middle person and communicates with the pharmacy on our behalf when in the health centre."*

From the site visits one Registered Nurse stated, *"she's [the IPAC pharmacist] got a lot of connections all over the place. So it's really good. We struggle with the hospital.... She's got her connections."* This was validated by the Medical Director who stated, *"Yeah she is pretty handy with her hospital connections."*

Figure 12. Changes in the effectiveness of communication with other health care providers, rated by health service managers (n=9).



3.3.11 Resources

Managers rated the effectiveness of the IPAC project promotional resources on a scale of 1 (not effective) to 5 (very effective) (see Table 11). The posters were rated at 3.7 (n=9), the brochures at 3.6 (n=8) and the video clips at 4.0 (n=2). Whilst the perceived effectiveness of the video clips rated the highest, six of the managers were not able to comment on these. One manager stated that they, *"could have done more with*

video clips once TV in waiting room sorted. Social media perhaps easier sometimes.” Another said that it, “was great and pharmacists got recognised from their posters which was reassuring for patients. Also having a [health service] uniform was a great ‘in’.”

When asked which resources worked best for patients, two managers noted the posters. However, it was noted by three managers that talking and face-to-face communication generally worked better due to low health literacy of patients. One manager commented, *“talking - many cannot read or write - and most people like to be engaged in a conversation.”*

Similarly, six managers reported that patients had difficulty with the resources, in particular with the brochure, again due to low levels of literacy. One manager stated patients had difficulty with the *“brochures due to language barrier and the inability to read.”* Another manager again stated, *“Resources can be lengthy so verbal communication seemed to work more effectively.”*

Table 11. Effectiveness of the IPAC project resources

Resource	Average	Total Responses (N)	Don't know or not applicable
Posters	3.7	9	0
Brochures	3.6	8	1
Video clips	4.0	2	6

3.3.12 Implementation of the IPAC Project

Nine managers rated the extent to which the health service was able to fully utilise the IPAC pharmacists' skills and expertise on a scale of 1 (not utilised at all) to 10 (fully utilised). The average rating was 8.4 out of 10, with a range from 5 to 10.

Nine managers rated their confidence in the pharmacists' professional capabilities on a scale of 1 (low confidence) to 10 (high confidence). The average rating was 9.1 out of 10, with a range from 5 to 10.

Managers rated the overall effectiveness of the IPAC pharmacist role at 8.8 out of 10, with a range from 5 to 10 (n=9) on a scale of 1 (not effective) to 10 (very effective). One manager stated, *“having the pharmacist on site has made an impact on clients' medication knowledge and compliance. Communication slightly improved with local pharmacy and hospitals the lack of communication has always been an issue, doesn't reflect the role of the IPAC Pharmacist.”*

Overall eight managers rated how well the project was able to be implemented at 8.5 out of 10, on a scale of 1 (not well at all) to 10 (very well). Responses ranged from 6 to 10. Managers rated how well the IPAC pharmacist role met the requirements of the health service at 8.7 out of 10 (n=9). The range of responses was 6 to 10. Feedback on aspects of the IPAC project that worked well included:

“All of it worked very well- even the board noted that HMRs were up and that the positive stories about the pharmacists' contribution had spread amongst them also (several had had one through the service!) Unexpected pluses were: the information stands they did at our NAIDOC celebrations, the popularity and skills they had with staff and patients for upskilling; the overhaul our imprest and meds management procedures got from them.”

“Having the same pharmacist on site for each visit. This allowed the clients to become familiar with the pharmacist and allowed the pharmacist to get to know the community.”

“Integration into the primary team and greater ACCHS team, especially in regard to clients with complex, chronic conditions.”

"The engagement and communication between clients and provider also the communication with the local pharmacy. [The IPAC pharmacist] worked really well in the area."

Nine of the managers identified challenges to implementing the project. Communication was the key barrier. Other barriers were IT, understanding of the role and the IPAC pharmacist not being HMR accredited. Comments regarding barriers included:

"Challenges with implementing the IPAC project was educating staff/clients on what exactly was the project and how it worked. Also how clients were to access services. Getting everyone on board with the process."

"The Pharmacist at our site not being eligible to bill the HMRs"

One manager made a comment about the recruitment of the pharmacist, *"we were not involved in the recruitment and have not had any management over [the IPAC pharmacist] which has posed some challenges for us."* However, one manager stated, *"get a new concept out there, just kept plodding away at it."*

In the interviews another a manager said they *"weren't involved in the recruitment process either"* and *"you can look at somebody's experience and qualifications and all of that kind of stuff. But the important thing you need to factor in ... for AMSs is organizational fit."* (Director of Health Services)

3.3.13 Support for Project Implementation

Managers reported receiving some support from the NACCHO affiliates in the respective jurisdictions in relation to the project. The quantity of support was rated at 3.6 out of 5 on a scale from 1 (none at all) to 5 (a great deal). One manager stated that support was, *"effective regarding the project."* Another manager stated, *"There may have been some but I don't remember any? We have a good relationship with [State Affiliate] and they help us a lot but it was NACCHO that mostly we dealt with. Sophie was also helpful in commencing the project."*

The quantity of support received through the NACCHO support network was rated 3.8 out of 5 (n=9) on a scale from 1 (none at all) to 5 (a great deal). Several managers stated that support was 'great' and 'quick' and that it *"clarified the role of the program."* However, one manager found the support network *"of no use"* and another stated, *"only one visit. I have only been in the role for 6 months."*

3.3.14 Impact of Other Initiatives

Of the managers who responded to the online survey, two reported that their service was participating in the health care homes initiative (22.2%). They were unsure if there was any impact on the IPAC project. None of the managers identified any other initiatives that they were participating in that might have had an impact on the work of the IPAC pharmacist.

3.3.15 Future

Overwhelmingly the managers wanted the IPAC pharmacist role to continue in their health service beyond the project (100%, n=9). The IPAC pharmacists had become part of their local teams and benefits were received by both patients and staff. Comments from managers included:

"They are a valued part of our teams now and will be really missed by staff, patients, community and hospital pharmacies."

"As previously mentioned, has assisted the clients immensely with knowledge of their medication and reducing medication errors which has increased compliance."

"It would be good with some change in structure, but overall a very positive experience."

Similarly, the managers overwhelmingly also believed that there was a role for an IPAC-type pharmacist role more broadly within Aboriginal Community Controlled Health Services in the future (100%, n=9). One manager commented, *"It is vital to quality prescribing, information matching between services and hospitals/ community pharmacies/ aged care facilities and other sites. It is also a vital compliance enhancement tool and will ultimately improve the health outcomes of Aboriginal and Torres Strait Islander Australians."*

Five managers felt the role of the IPAC pharmacist, based on the 10 core roles, was acceptable. Three managers thought there needed to be changes made. One felt that HMR accreditation was necessary stating they *"require a credentialised HMR Pharmacist."* Another stated that they *"need to be allowed to do as many HMRs as the ACCHS needs done."* The cap is a limitation through the Australian Government Department of Health.[66] The third manager felt the role should include *"dispensing and the ability to do Webster Paks."*

Six of the nine managers indicated they would like to have the services of a non-dispensing pharmacist full time. A couple of services indicated fewer days. The current pharmacists' FTE in the project and size of the health service was not collected in this survey.

Eight managers provided their advice for other health services who were going to introduce an IPAC-type pharmacist role. They were generally very positive saying, *"don't hesitate," "do it, worthwhile"* and *"embrace it with open arms."* Another manager stated, *"I would encourage the role of pharmacist within health services as we provide so many wrap around services that a pharmacist would provide quality and safe care in regard to medications and education of patients."*

One manager responded from the perspective of participating in the IPAC project saying, *"ensure staff and community are fully aware of the project and the outcomes the service is trying to achieve. Explaining the benefits of the project."* Another manager added, *"put them on as direct staff members - caused some issues with EMR access and uniforms initially - both of which really helped to embed them in the roles."*

Another manager commenting in the interviews stated, *"I think it's about the person that you get in because I think that if you've got a young pharmacist who's never been out in the community, it would be very difficult for them and they would sit in their room. So I don't think you'd get the benefits from that. Whereas with [the IPAC pharmacist] who has been with us for quite a while and understands that it's about getting out and talking to people that you get the most work done."*

Final comments provided by the managers recognised that the IPAC project was exploring a new concept and supported the continuation of the role.

"It is a wonderful project and we really hope the roles continue."

"We definitely need Pharmacists within our services to provide quality care to community."

"This project is a 'toe-in-the-water' initiative. It needs to become a fully-fledged deep dive and swim."

"Thank you so much for the work at every level to get this project up and running."

In the interviews managers were also highly supportive of the role and wanted to see it continue: *"I don't think an AMS can work without a pharmacist."* Another manager was also keen for the role to continue for two reasons *"One is that we think it is valuable... It's really interesting space. I really like the idea of the combine public health and clinical. I think that it's a really good mix particularly in terms of quality use of medicines with the GPs... very much about quality use of medicines and the client stuff and I think that it could, the position could be really nice mix of those two things. And so that's one reason. The other one we just haven't had it long enough to see what the potential is from a, from particularly from a client education and an adherence point of view."* (Clinical Director)

3.3.16 Overall Findings

Overwhelmingly health service managers supported the continuation of the IPAC pharmacist role in their ACCHSs beyond the project. The group also believed that there was a role for an IPAC-type pharmacist role more broadly within ACCHSs in the future.

The role resulted in benefits for both patients and health service staff. The IPAC pharmacists influenced medicines-related priorities with the health service, communication processes between health staff, regarding patients' medication or treatment and positive clinical care outcomes for patients. The most useful aspects of the IPAC pharmacist role were the provision of medication reviews (including HMRs), education for patients and staff, following up patients and improving compliance, improving relationships with stakeholders, and having access to a medicines expert. Managers felt that the pharmacists had a great impact on patients' knowledge about their medications and also facilitated patients' adherence to their medications. Managers reported the effectiveness of communication with all health care agencies had improved since the IPAC pharmacist had commenced.

Challenges were identified that impacted upon the IPAC pharmacists' role including space, information technology, lack of cultural awareness training locally, lack of HMR accreditation held by the pharmacist, staff not recognizing the value the pharmacist could bring, pharmacists' expectations of the service and language issues. The workload associated with recording data for the evaluation and lack of clarity in relation to expectations of the project were also issues. Managers rated the effectiveness of the IPAC project promotional resources as average. Conversations and word of mouth were suggested as more effective communication strategies as some patients had low literacy and English was not their first language.

Overall most managers felt the health service was able to fully utilise the IPAC pharmacists' skills and expertise and were confident in the pharmacists' professional capabilities. Managers rated the overall effectiveness of the IPAC pharmacist role highly.

3.4 Community Pharmacist Surveys

3.4.1 Demographics

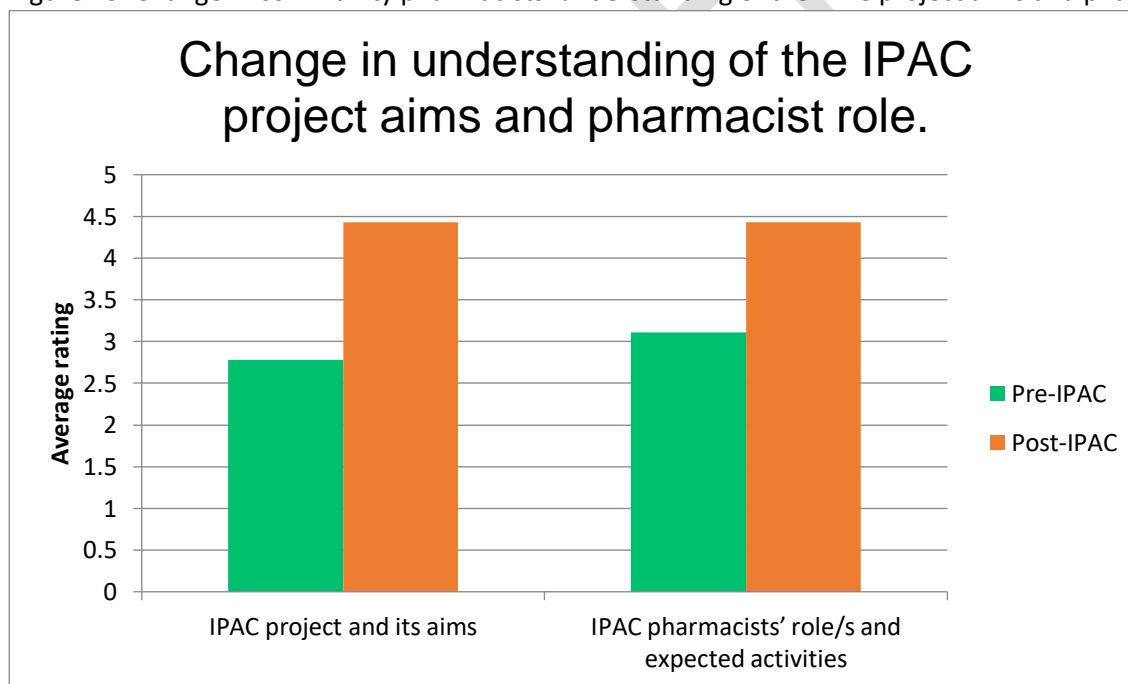
Ten pharmacists (six males and four female) from ten different participating health services completed the online survey. Half (five) of these pharmacists were between 31 and 40 years of age, two were 30 years or younger, two were 41-50 years old, and one aged 51-60 years. Most (six) of the pharmacists were owners, half (five) also managed their pharmacy, and two were pharmacist employees. These pharmacists had varied levels of experience in their pharmacy, ranging from 2 to 23 years, with an average of 7.9 years of practice. Similarly, the number of hours per week spent at these pharmacies differed, ranging from 8 to 65 hours, with an average of 33 hours per week. Most (six) of these pharmacists had not previously worked in or with a local ACCHS previously. Of the four that had previous ACCHS experience, three had roles in performing QUMAX site visits, and one undertook Section 100 visits.

3.4.2 Clarity of Roles and Relationships

There were issues at the commencement of the project relating to community pharmacists' understanding of the aims of the IPAC project, and the roles and expected activities of IPAC pharmacists. On a rating scale from 1 (not clear) to 5 (very clear), at commencement seven community pharmacists scored 3 or less for their understanding of the IPAC project and its aims with an average of 2.8, and five scored 3 or less for their understanding of the roles and activities of the IPAC pharmacists with an average of 3.1.

By the end of the project the community pharmacists reported having an improved understanding of the IPAC project and its aims, and the roles of the IPAC pharmacists. Both ratings increased to an average of 4.4 out of 5 (see Figure 13).

Figure 13. Change in community pharmacists' understanding of the IPAC project aims and pharmacist role.



Similarly, the clarity between the roles of the IPAC pharmacist compared to community pharmacists was seen as lacking. Six pharmacists scored 3 or less on this 5-point scale, with an average score of 2.9. One pharmacist stated, *"the structure of the IPAC project whereby pharmacists were recruited independently of the community pharmacy which had worked with the AHS [Aboriginal Health Service] for many years did not facilitate any relationship between the community pharmacy and the pharmacist recruited for the project."* Another stated *"I think the IPAC pharmacist should be utilised for more specialised services. Medschecks and HMRs are community pharmacist roles."* As a result, the expectations of the community pharmacists of the IPAC pharmacists' role was unclear, with one pharmacist stating, *"I wasn't sure what to expect"*, and another indicating there was less autonomy than what was expected.

3.4.3 Patient Referral to IPAC Pharmacists

Half of the community pharmacists referred a patient to an IPAC pharmacist. Barriers to referral of eligible patients included patient time constraints and opening hours of the clinics. For those that did refer, the process was considered easy, with an average score of 4.4 out of 5 on the 5-point scale. Of those that referred, two referred an estimated 5 patients, two referred ten, and one over 50 patients.

Through the referral process, the community pharmacists expected that patients would benefit from an increased understanding of their medicines and/or improved compliance, through one-on-one interaction with a health professional they were familiar with, with all respondents providing positive statements such as *“They seemed to understand their medicines and when to take them better”*, and *“Improved understanding of their medications and better compliance. Also, they would appreciate seeing a familiar face when discussing medication issues”*. Patients were also willing to be referred to IPAC pharmacists, with community pharmacists scoring their average willingness as 8 out of 10.

Community pharmacists also had trust in IPAC pharmacists in their ability to develop rapport with patients, scoring an average of 8.7 out of 10. Examples of effective relationships between patients and IPAC pharmacists and patient benefits from the community pharmacists’ perspective included *“clarifying device use such as puffers, etc. was very efficient, and the IPAC pharmacist’s role in getting patients to enrol and adhere to Webster Paks and other compliance building activities was fantastic”*, and *“often I would have community members ask if she was in today to see her and also mention her name when talking about medication changes so she was evidently held in high regard and respected.”*

3.4.4 Changes in work and relationships

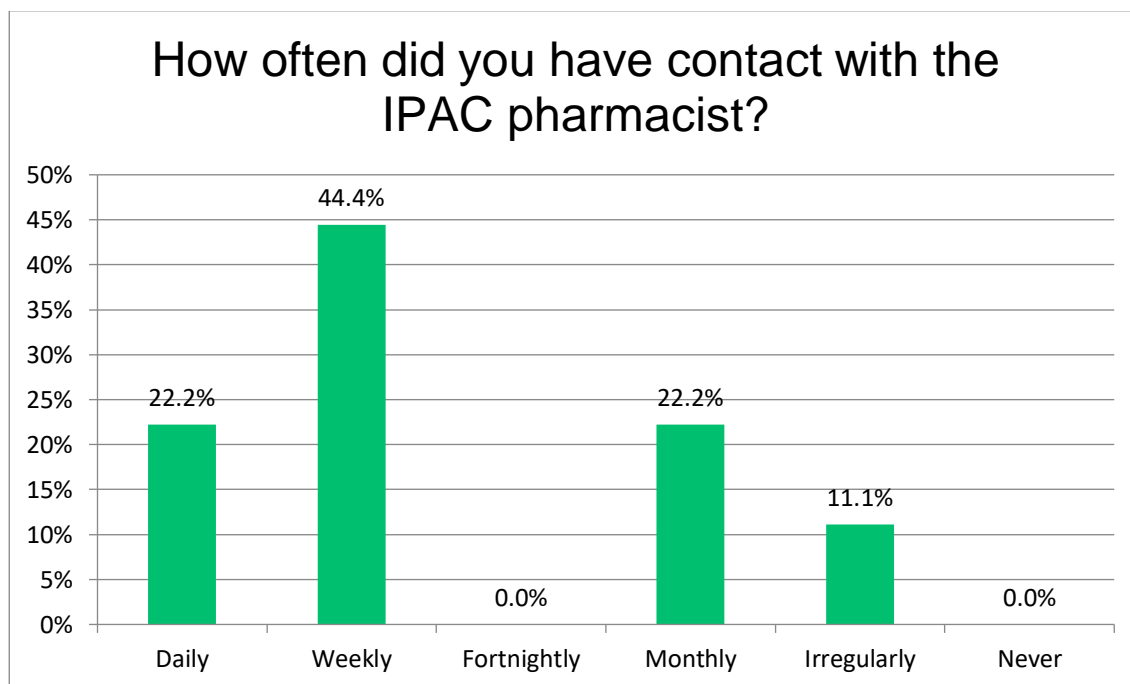
In regard to changes in work-related activities since the introduction of the IPAC pharmacist, no activities decreased, and many stayed the same, though some activities were increased. Activities that were most frequently increased/improved (reported by at least half of community pharmacists), included the efficiency of processes for medicines supply, facilitation of communication with GPs regarding prescriptions, support for ACCHS patients, clinical appropriateness of prescribed medicines, and an increase in dose administration aid preparation and supply. Of the patient-related activity, participation in HMRs was improved, as well as referrals for HMRs, patients were more interested in their medicines, and eligible patients were receiving a dose administration aid. Comments from community pharmacists included:

“The IPAC pharmacist was very helpful for the patients, and also increased our understanding of Aboriginal cultural issues.”

“The main benefit that I could see with the IPAC pharmacist was that there was a pathway for the clients to have access to HMRs and this was promoted by the IPAC pharmacist to the GPs so this service became more available to the clients and in turn I would think would have improved health and medication literacy and adherence.”

However, these improvements were likely hampered by the irregular low frequency of contact between community and IPAC pharmacists, with three community pharmacists (33.3%) indicating they had contact with the IPAC pharmacist only monthly or more infrequently.

Figure 14. Frequency of contact with the IPAC pharmacist.



Prior to the commencement of the IPAC project, relationships between community pharmacists and the relevant health service were not rated strongly by many of the community pharmacists, with responses ranging from 1 to 8 on a 10-point scale (1 being not effective and 10 very effective), with an average of 5.1.

The quality of communication that did occur during the project was high, with community pharmacists rating the IPAC pharmacists' communication an average of 9 out of 10 (n=8). Working relationships with health services were also improved, with community pharmacists scoring an average of 8.7 out of 10 (n=7) after commencement of the IPAC pharmacist (mean increase of 3.6). Three community pharmacists commented on how community pharmacy could further support the local ACCHS:

"If the ACCHS informed us that they would like us to stock certain medications at all times, so that the patients would not have to wait for us to order them, then we may be able to oblige with this request. We can also deliver medications, discuss problems with patients, and work with the GPs and other health professionals at [health service] to improve overall patient health."

"If there was ongoing funding for the role of the IPAC pharmacist I think that would be great. Large urban AHSs would probably employ their own pharmacist in this role. However, in remote settings I believe the best model would be to increase the section 100 pharmacist support allowance very substantially to be able to fund a full-time pharmacist on site at the large remote clinics. However, I would get the community pharmacy to be responsible for employing the pharmacist and then for covering on holidays etc. The remote pharmacist should then work with the community pharmacy that dispenses for the remote clinic. This pharmacist should not be a solo pharmacist working in isolation from the community pharmacy. A hospital pharmacy would not have clinical pharmacists who were self-employed directly by a ward of the hospital who had no relationship with the main hospital pharmacy delivering clinical ward services. Similarly, it does not make sense for a pharmacist to be employed directly by a remote health service working in isolation from the main pharmacy."

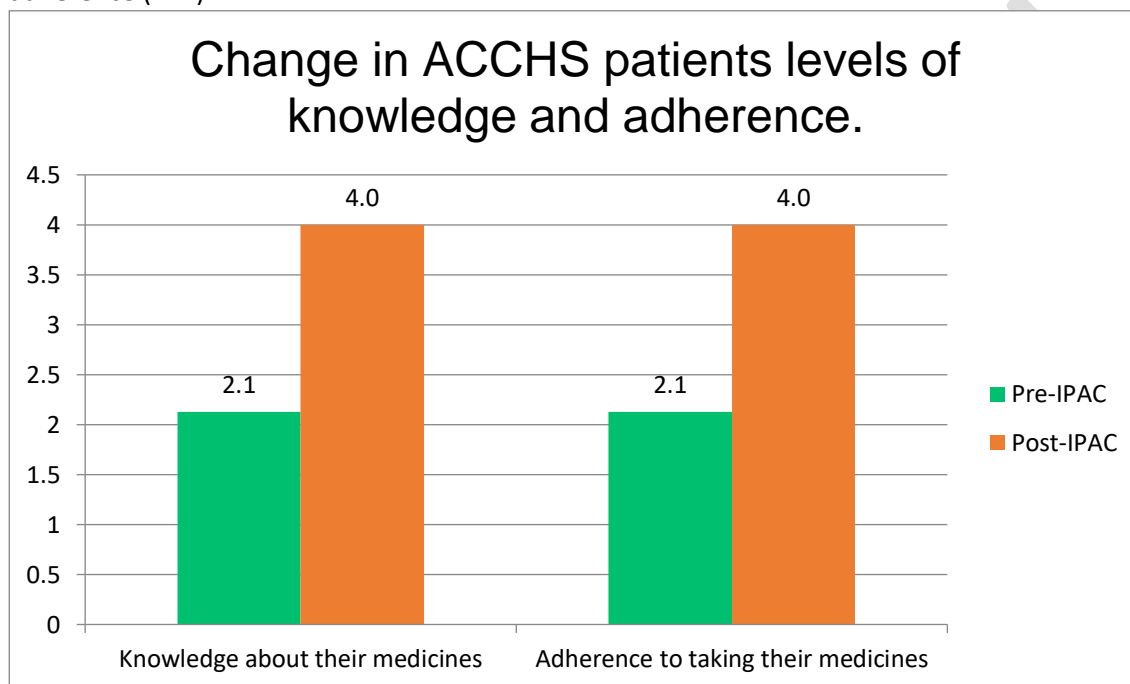
"Providing HMR's once training is complete to ensure that the patient is being reviewed by someone with knowledge of regular adherence etc. Joint collaboration between community and IPAC pharmacists to deliver education and training to both facilities' staff."

3.4.5 Potential impacts on patients

ACCHS patient knowledge and adherence to medicines was perceived by community pharmacists to be poor at the commencement of the project. On a 5-point scale from 1 (very low) to 5 (very high), pharmacists rated patient knowledge of medicines and adherence to medicines with scores at 3 or less.

Perceived patient knowledge about their medicines and adherence to medicines also increased, both scoring an average of 4.0 out of 5, compared to 2.1 prior to involvement from the IPAC pharmacist. This improvement in medication adherence was believed to be largely attributed to the influence of the IPAC pharmacist (with the significance of their influence scoring an average of 8.4 out of 10).

Figure 15. Community pharmacists' perceptions of change in ACCHS patients' levels of knowledge and adherence (n=7).



3.4.6 Overall Findings

From the viewpoint of the community pharmacists, the overall performance of the IPAC pharmacists was high, scoring an average of 8.7 out of 10 (range from 6 to 10; n=7). IPAC pharmacists were seen as being very helpful, useful, and a great point of referral for general practitioners. *"It's a great initiative to have within the community especially when there is limited transport into the pharmacy."* All community pharmacist respondents who responded to the question (n=7) believed that there is a role for IPAC-type (non-dispensing) pharmacists within ACCHSs.

Similar to previous responses, improved communication leading to better patient knowledge and medication adherence were essential roles of the IPAC pharmacist. Community pharmacists concluded: *"These patients need serious attention - their compliance is poor, so we need someone constantly assisting them", "Increased medication knowledge is vital for increased adherence", "It allows people to have the conversation at the time of seeing a doctor with a pharmacist about their medications. They can talk and ask questions while still at the health centre and then hopefully feel more confident about taking their medication once they go home."*

Community pharmacists were unsure as to the workload of IPAC-type pharmacists, suggesting roughly 3 days per week may be required, though *"it depends entirely on the size of the health service and how many clients they have"*. Most community pharmacists were also content with the roles of the IPAC pharmacist. *"I am very glad the project was undertaken and hope that it leads to the permanent funding of pharmacists in AHSs as I*

believe they can really improve the client's health and medication literacy and thereby their medication adherence."

While most intended to continue their role as a community pharmacist, largely due to their investment in the pharmacy as an owner/manager, three of the ten community pharmacists indicated their interest in performing the role of an IPAC pharmacist. *"I see an issue that needs attention in the community and this is a fix", "We are very interested in helping to keep this service going into the future (we desperately need more pharmacists to do that). We feel that it is a valuable part of our community and is something that we are very focussed on as a community pharmacy."*

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3.5 Case Studies/Site Visits

Three ACCHSs were selected for site visits for the qualitative evaluation of the IPAC project (see Appendix J). Seven focus groups or group interviews were conducted across the sites. Participants were 17 ACCHS staff and 17 patients / carers. Individual interviews were held with eight (8) health service staff and three (3) patients / carers. Individual interviews were conducted with the IPAC pharmacists working at the three sites. Fieldwork included a day observing the work (observation or shadowing) of the pharmacist and the service in general as well as observation of the community context (e.g. visit to community pharmacies). Table 12 summarises data collection at each site.

Table 12: Data collection at each site visit.

	Site 1 – Remote Service	Site 2 – Regional Service	Site 3 – Urban Service
Individual Interviews	1 x IPAC pharmacist 2 x individual patients	2 x IPAC pharmacists 4 x GPs (3 face to face and 1 by telephone) 2 x Outreach Workers (AHPs) 1 x Clinical Director	1 x IPAC pharmacist 1 x Nurse 1 x Patient/Carer
Focus Groups	1x patient FG (n=5) 1 x service FG: <ul style="list-style-type: none"> • 1 Medical Director • 1 Director of Health Services • 1 Nurse • 1 GP registrar • 4 AHPs 	1 x patient FG (n=6)	1 x patient FG (n=6) 1 x Health Professional FG: <ul style="list-style-type: none"> • 1 AHP • 1 Nurse 1 x service staff FG: <ul style="list-style-type: none"> • 3 GPs • 2 Managers • 2 Nurses 1 x GP FG: <ul style="list-style-type: none"> • 3 GPs (further discussion after the service FG)
Observation	Community observation Shadowing IPAC pharmacist (1 day) (No patient consultations were observed) Service observation at 1 clinic (including morning staff meeting)	Community observation Shadowing 1 IPAC pharmacist (1 day) Service observation at 4 clinics	Community observation Shadowing IPAC pharmacist (1 day – over 3 separate days) Service observation at 1 clinic

3.5.1 Case Study 1: Remote Health Service

Background of service

“We could not run our AMS without a Pharmacist” (Medical Director)

This ACCHS is located in a large remote town with the population estimated to be just under 20,000. Approximately 17% of the population identify as being of Aboriginal and / or Torres Strait Islander origin. Major industries include mining, tourism and agriculture. The town is classified as a RA4 according to the Australian Statistical Geography Standard-Remoteness Area (ASGS-RA)[67], and a 6 on the Modified Monash Model (MMM) [68].

The service operates clinics across five sites, including three in smaller towns, considerable distances from the main clinic. Clinic staff include Aboriginal Health Workers, nurses, a medical director, GPs, a GP registrar, and visiting allied health services. The Director of Health Services oversees the clinics. The service does not have a diabetes educator, but other allied health services include a podiatrist, speech pathologist, dietician and an exercise physiologist. The main clinic has a section 100 pharmacist onsite from the local community pharmacy that can dispense medications for patients.

The service has been in a state of change over the last 12 months or so, with the appointment of a new CEO, new clinical staff and other new board members. Working together with local Hospital and Health Service and the Primary Health Network in a tripartite agreement, the health service has integrated three existing primary health care centres in outlying communities into the ACCHS model.

Profile of pharmacist

Prior to taking on the role in November 2018 the IPAC pharmacist had worked for nearly four years in one of the local community pharmacies in the town. Previously she had trained and undertaken her intern year in urban locations. The IPAC pharmacist had strong local and professional connections, including with the health service. The community pharmacy the IPAC pharmacist had managed was the section 100 pharmacy for the service. She had professional and social links with early career allied health professionals throughout the region. The IPAC pharmacist worked full time across two clinic sites; spending one day at the P clinic and offices to undertake project administration and four days in clinical practice at the B Street Clinic. She was currently undertaking her HMR accreditation and aimed to be accredited by the end of the project.

Relationships with Patients and the Community

Cultural competence

Patients were happy with the communication style and approach of the IPAC pharmacist indicating she was culturally safe and accepted by the community. One patient had recommended others to go and see the pharmacist, *“in my group and different other people, I tell them; ‘Go and have a revision of stuff’, and I explain it to them what I have been through.”* (patient)

The pharmacist’s cultural competence was also observed during field work:

- When referring to a group of homeless peoples, she respectfully discussed “People living “hang out at river” and the need for the main older clinic is where this group feel comfortable attending.
- She took charge of organising an AHP to do a painting for a staff member who was leaving. She asked the Senior AHP if this was appropriate.
- Asked for advice on blister packs – have to have a snack as well as meals, asked Senior AHP about advice on where patient lived
- The Senior AHP was deferred to for any other cultural advice, e.g. organising focus group discussions; if the researchers could observe patients and which patients would be most appropriate for individual interviews.

Health services staff reinforced that cultural competency was a key requirement for the role:

"She just doesn't focus just on medication she's got such a passion for Aboriginal people and she won't just stop there which is awesome. She's really good." (Nurse)

"Someone who treats my people with respect and talks to them and listens to them. So, I'm not going to say this would work anywhere else if you haven't got the right pharmacist. I think they need to understand the living environment of our patients. And what other illnesses are in the house because I take out [IPAC pharmacist] out to see one person and there might be other people in that house with other chronic diseases. So [IPAC pharmacist] can talk to them too about taking their medication." (Senior AHP)

The Pharmacist was also welcomed into people's homes and understood the importance of working with AHWs:

"She interacts with the community and that pretty well. You just have to be out there because the majority of people she works closely with goes pretty well." (AHW)

"I think that's how the community really feel. One person has a good experience and then it kind of goes through [the group]." (AHW)

In contrast, both patients and staff mentioned that the current Section 100 dispensing pharmacist that currently worked at the service, may not be suitable in IPAC role.

"...If we had the pharmacist that we got here, on the floor, you would have some very unhappy people. It would be like, 'So when is your project up?'" (Nurse)

There was an importance to maintain the current IPAC pharmacist. When there was a discussion regarding the possibility of an additional pharmacist joining the team, the Aboriginal Health Worker stressed the importance of maintaining the relationship with the current pharmacist:

"Sorry, I have to frown on that because patients get used to [IPAC pharmacist]. And if you changed [IPAC pharmacist] now, I don't know if they would have the same faith in another pharmacist" (Senior AHW).

Integration into the team: "Part of a lot of teams"

During the observation, despite the new team members, it was obvious at the morning meeting that the service had a collegial team environment and the IPAC pharmacist was a core part of the primary health care team. The IPAC pharmacist participated in discussions around a local fundraising social event and the team planning day and introduced the evaluation team. However, initially it was difficult for the IPAC pharmacist to establish her role:

"I think she did struggle in the beginning. I don't think she was respected with what she was doing and especially down here [at this clinic]. She was forced around and there were a few bad days for her where you know people were pushing her out of rooms and didn't value her work. I think she's done really well to make herself [part of the team]..." (Medical Director)

While the IPAC pharmacist was formally part of the regional team, she was seen to freely transition across a number of different teams (AHW team, Integrated Care team, Clinic team or PHC team) and, importantly, bring these teams together:

"I think in terms of her being a team member I think she's part of a lot of teams and helps bring them together like she does a lot of home visits with [Senior AHP] and [AHP] and you know chasing up

patients that we have trouble getting in here regularly. ...But she kind of gels a lot of the different groups together.” (GP Registrar).

“... I think that everybody said [name of IPAC pharmacist], yes, she sits in the Regional Team, but she actually functions in pretty much everybody's team.” (Director Health Services)

“I wouldn't say she belongs to one department or one team. She is shared by all. So yeah it's awesome to have her around.” (AHW)

The IPAC pharmacist was continually developing relationships across different teams. Her relationship with the allied health teams had been limited due to her physical location in the B Clinic (the allied health team is located at P Clinic).

“I do have interactions with them [the Allied Health team] but because I'm not part of the allied health team ... there also in their own little world, so they're not part of the primary health care team. Yes, the primary health care sites want to utilize them but they also do their own thing as well.” (IPAC pharmacist)

However, the IPAC pharmacist was developing relationships with the exercise physiologist through a group program and had just started to receive referrals. Being flexible and open to opportunities for key collaborations were keys to establishing her role in the team as well as relationships with patients:

“[I] can't just focus on what I'm doing, you've got to work as part of a team. So, if you go out with someone and they also need to go and do a job for themselves then you're not necessarily doing exactly what your role is. So you might go out and if [Senior Aboriginal Health Practitioner (AHP)] needs to go and talk to someone about this ... and she's also said to me ... 'I'm going out on this side of town, we can go and see this person that you've asked me to see but we've got to do them both together'. ... you've got to work with everyone and also take the opportunities to go out and see patients when you can as well. Because when I first started that wasn't an option and it wasn't really encouraged or available and that meant that I wasn't having as much patient contact as well, because there's lots of people who we can't get into the clinic and they're the people that the hospitals identified that they could really benefit from I guess, the hospital pharmacist has referred.” (IPAC pharmacist)

A close and respectful working relationship with the Senior AHP was key to developing the role and working with patients.

“I will be honest where I see her really shine is basically when [Senior AHP] come on board and was able to take her out into community and really work in the community. That's where mob really see the difference and start enjoying [the role] And that was a few months ago, I think. Where we can see the gains of what's been happening. Going out with the health workers.” (Nurse)

From the observation, there was a sense that the IPAC pharmacist had been given a number of responsibilities and participated in important projects with senior staff. These responsibilities had raised her profile to be a senior member of the clinical team.

Patient Recruitment/consent process

While the IPAC pharmacist initially struggled, she successfully recruited patients through several strategies. While patients were usually recruited opportunistically; the process had gradually become more formalised. At first the IPAC pharmacist tried to book her own appointments with patients, but this was not successful.

“At the start it was very much made just trying to figure out how I fit in to this service and we tried a lot of different ways to capture patients. Do I see them before the doctor, or do I see them after? Do I see them opportunistically? Do I see them for booked in appointments and try to call and figure, find

out if they would like to come in and only see me which doesn't really work? And trying to give the staff as much information as possible about what I can do and that's just taking a really long time with different staff in here.” (IPAC pharmacist)

One strategy was to focus on the urgent recall list:

“...In the beginning...she really struggled with trying to get patients in. So, she [asked me] ‘how can I look at getting some patients?’ At that time our urgent recall list was ridiculous with high HbA1cs and I said here you go. Come and sit down and she goes ‘oh my gosh this is amazing’. ... ‘this is your urgent recall list’ and I said, ‘I know but obviously it is showing you that they are not taking their medications that is obvious’. She said ‘oh this is amazing.’ So, then we were able to print that off and she was able to talk to the nurses to bring them [the patients] in. So really looking at what she was always looking at but different ways. Well that was one way of doing that.” (Nurse).

As an alternative the IPAC pharmacist saw the daily patient list through the CIS (Best Practice), which health professional the patient was seeing and what were their health concerns. The IPAC pharmacist could also book in her own patients for appointments once a relationship was established with the patients:

“The other way was ... getting reception to kind of red flag her. She'd be able to go through the week appointments list as well and go through each person to see who [could see her]. (Nurse)

“We identified patients or go out to the waiting room and chat to people and then usually bring them in to one of the clinic rooms and just go through the explanation of the project. And if they were happy to be a part of it, then sign them up.” (IPAC pharmacist)

While the GPs and nurses did not actively recruit or consent patients, they did informally call on the IPAC pharmacist for assistance. Through this process, patients could be recruited and consented into the project. The GP registrar said initially there was not a formal process, so she would just ask the IPAC pharmacist to join challenging consultations. Now there is *“a bit more of a pathway”*. Flexibility was still required so *“a lot of the time it's me dragging [name of IPAC pharmacist] in here to help fix it.” (GP Reg)*

The IPAC pharmacist did her own consenting as *“It wasn't really an option at the start to have someone doing that extra work.”* Working with the AHWs on home visits (as discussed above) was also an effective way to recruit patients. Another recruitment strategy was through *“Work it Out”*, an exercise program for patients living with chronic disease:

“She the one that brought me down here from that workout room.” (Patient).

“just with the education she attended “Work it Out” a couple of times. Did the education sessions. Spoken to the clients and then I've come into work the next day and some of them have booked appointments to come and go through the medication list with her.” (AHW)

Patient Case Study: Connecting with Patients at Group session: Wanda

One of the patients that I've been working with I met at 'work it out' which is one of the exercise physiologist programs. I met her there and the first or second education that I gave I was just talking about, just medicines, I think. One education I spoke about the importance of the flu vaccination and the next time I just took a blank made medication list that I showed that I could help you fill this out if you wanted to come in and have an appointment with me. From there she made an appointment and it was actually made up at the other clinic which is even harder to get people into. So, she made an appointment and we organised she would also see the doctor after, at the same time so we made her medicines list together. We spoke about that she didn't like taking as many tablets as what she was, she just thought it seemed like a lot of tablets. After I explained them to her, she was she was happy with that, but there was a couple [of medications] that I spoke to the doctor about and The doctor invited me in to the to the consult and we

spoke about it all together with the patient. And we stopped a couple of her medications and made the changes that were required. And from there she had her medicines list and she was happy with that and she also had her medications changed and she was really happy.

Culturally respectful relationship building and cultural understanding of the IPAC pharmacist was also demonstrated through the consent process. The IPAC pharmacist had a nuanced understanding that relationships and rapport required time; particularly due to the continual staff changes at the clinic.

"...the rapport building has been really important to what I've been doing. So, some of the time it really wasn't the right time to sort of jump in and ask for consent for the project without building up that bit of trust with the patient. The patients have had so many clinicians come and go on them, there's a lot of... 'well you're going to go'. I have to tell my story to every single person who I come into this clinic for, why can't I just tell my story once and then I see the same person again?' ... It's like no-one's quite willing to just divulge every single bit of information about themselves on the very first visit. So, it definitely takes a bit of time to build up that rapport." (IPAC pharmacist)

"I think the second or third visit there's definitely more engagement because they sometimes seen doctors only once. So, if you see them a second time that it's a familiar face and then by the third time it's like 'oh you'." (IPAC pharmacist)

Patient Survey (N-MARS)

The one aspect of the role that the IPAC pharmacist highlighted as something less worthwhile was the N-MARS. She did not work with other staff to conduct the N-MARS. She surmised that the questions were not in-depth and did not delve into the reasons for non-adherence:

"I think the theory behind it is good. I think a compliance check is definitely part of the pharmacist role. Whether or not asking a patient those exact questions three times throughout the project is going to make a difference, I'm not sure. I think that the information that you're giving patients in regard to their medicines is more important. For example, me just telling someone you need to take your tablets, that doesn't give them any motivation to take tablets just because I'm telling them. So, we need to find out why aren't they taking them, are they feeling sick, do they not know what they're for, are they at inconvenient times. How can we make the medicines work for them in a way that the medicines still work and do what they need to do?"

Nevertheless, the IPAC pharmacist incorporated the N-MARS questions into general conversations and adapted the survey for different patients *"So I try to incorporate it into general conversation. It sometimes is a tick down the questionnaire but other times it's sort of like weaved into conversation just to make it less sort of study-ish."* (IPAC pharmacist)

While some questions were not at all useful to assist with understanding patients or with education:

"The sharing one, the sharing question, I haven't had anyone tell me that they do share their medicines because I and that's what they've told me they don't share them, but I'm not sure if they would in that sort of direct question whether they would be.... I think patients know not to share their medicines, so they're not going to tell me that they're sharing them too because I'm asking. If it came up in a conversation, and it was really informal then they might, but if I'm the medicine lady and they know that I'm looking at their medicines and trying to help them with their medication they're not going to tell me that they are sharing and doing the wrong thing with their medications because I think most people know that, that's not how they work." (IPAC pharmacist)

One question was useful for education and to discuss strategies:

"there's a question about 'Is it hard for you to get your medicines or have access to them', from there we would talk about like do you want a delivery or is there a specific day that would be better for you to pick them up from the pharmacy or just how can we make it better."

Key roles

Patient-centred roles

Patients knew the IPAC pharmacist as *"the medicines lady"*. The IPAC pharmacist was passionate about being a medications expert and need for this role in ACCHSs. When asked the IPAC pharmacist indicated she would stay in the role if it was to continue. The main reason was to expand the scope of practice of pharmacists and have medications expertise in the primary health care team:

"I'm happy with the progress that I've made so far, and I think that there's still heaps of work to be done. And I just think it's super awesome for pharmacists to be expanding their scope of practice into these kinds of roles. I think it's really good for patients because they're getting someone who is focused on medicines and knows about medicines in their health care team which hasn't happened before. I think it's good for the service to make sure that they are having quality use of medicines. I just think it's awesome." (IPAC pharmacist)

The IPAC pharmacist recognised that the role was important and that other health professionals in ACCHSs did not have the same expertise around medications:

"I really like what I'm doing. I think it's really important. I really like working with the clients that [health service] services. I think that there's a huge gap with medication management that just hasn't been addressed before. There's been no one in these services focusing on medicines. There's a lot of other things that a lot of services are doing really well but no one... Medicines are a bit too scary for people to go close to and have confidence with and have that training that that's where they want their expertise." (IPAC pharmacist)

There was a focus on developing patient-centred holistic care around medications that should be part of the organisational culture:

*"I think the main thing from organizational level is just having an understanding that medicines are an important component of holistic health care and giving them the appreciation ... We need to keep up with relevant guidelines for them and we need to make sure that people are taking the medicines that they need to be taking and not taking medicines that they don't need to be taking. **Making sure that the patient is involved in that process.** I think for a really long time the doctors or any clinician has been making decisions on behalf of the patient without the patient being at the centre of that decision-making process and that means that they don't know what their medication is for. So, if it's not making them feel any better or any worse then, I don't know if I would take a medicine that I didn't know about that didn't make me feel any different, and no one could tell me what it was for or spent the time to tell me what it was for."* (IPAC Pharmacist)

Medication reviews were seen to be the most valuable part of the role by the IPAC pharmacist:

"I think the medication reviews would be the priority or the area that I can say that the most benefit would get from patients are reconciling medicines, making sure that their therapeutic...making sure that patients are taking their medications and giving the information to patients about their medications. That's the biggest thing that people have come up to me and said 'We're so happy that you're here because no one knows why they take their medication'. So that's what a HMR does as well, or medication review, whatever you want to call it, but that's the that's probably the main one." (IPAC pharmacist)

Patients and staff confirmed that this was their understanding of her main role. Why this might be seen as

an obvious role of the pharmacist there was huge impact on patients and on staff:

"And I mean and they're asking questions. We [Aboriginal people] don't ask questions. We just have the faith, the doctors going to prescribe it to us, obviously we need it you know. They don't know what it's doing to them. So, they ask her lots of questions. So, I mean they are getting educated. It's good. It's good to see you know they're taking [their medications], I suppose ownership of their own health. You know so it's good to see." (AHW)

"There was a patient ...that was being seen by a new nurse. And this patient had someone to advocate for her [and] wanted to know what are your medications? And she was asking this new nurse about all her medications. So, this poor new nurse was sitting there with the instructions from the medication box trying to explain it to the family and the family sitting there because she was using big words with this family ... but they wanted to know what was going on. So that's when I turned around and I said 'Hey, we got [name of IPAC pharmacist]. Book her in with [IPAC pharmacist]' and they were like 'oh yay.' (AHW)

Patients had started to ask questions about their medications and the IPAC pharmacist had the time and knowledge to answer these questions. The IPAC pharmacist role was seen as an essential part of the service in an AMS given the number of medications that patients are taking.

"[She] is awesome at what she does. I've worked closely with her through the 'work it out' program as well as a few home visits and everything. And even just patients... They come in for an appointment, want to see the doctor just to ask the question why they've been given this medication you know. I mean she can sit down and yarn with them and then there's no need for that doctor appointment. So, it frees up a lot of their time too. So, education wise for medications you know we've had our clients come in to do the medication list reviews and stuff like that. And she's awesome at what she does, and she has that community connection now." (AHW)

"Someone that asked me a question about whether their medication plays a role and I said I don't know. [The patient] said 'well you need to get someone in here.' And I said 'we do. ... We have a pharmacist.' ... She was telling me what we needed. I said 'already we have that lady. You might not have been and visited since, but she is here, and she can answer anyone's question.'"" (Senior AHW)

The pharmacist role was seen to compliment the doctors' roles:

*"Look to me Aboriginal patients are on the right medicine, but they don't take it because they're not given all that information. So, what I see is a lot of people are prescribing multiple drugs and having chronic disease means you are going to end up on 10 or 15 pills if you correctly prescribe everything for every condition. To me that doesn't work. There is very little respect for the person. Aboriginal people I don't think speak up for themselves in terms of side effects. Talk up for whether they want to take these pills, they just don't take them rather than come back and say these pills are making me sick or I don't want to take them or why am I actually taking them. There's a lot of decision making for Aboriginal people without their consent or their understanding of the pills and I find that a lot. So, to me a pharmacist just puts a different angle on what doctors do. I mean we're very good at prescribing the right stuff... but the amount of drug interactions you can get from you know 10 or 15 pills. They see people on four or five blood pressure pills. If you suddenly start taking them and you haven't taken that history of whether they have actually been in here in the past you have all sorts of trouble. And then with our level of renal disease in the area, we need to be a lot more mindful about what drugs we give people. And we still commonly see locums prescribing anti-inflammatories, for example, you know high risk cardio vascular and renal disease area. So, trying to get people educated and educating the doctors. **So to me, I don't think an AMS can work without a pharmacist.**" (Medical Director)*

This was supported by the patients who felt that the IPAC pharmacist had picked up issues with their medications that had previously not been discussed by other health professionals:

“Well that was this tablet she gave me. It something starts with a J. Jasmine or something, like anyway And she said it protects your kidneys and your heart and everything see. And she could not understand why I wasn't on it before. I thought well as long as I'm on it now and this was good enough for me. And she knocked me off from a lot of other tablets different tablets and just wacked me on a couple of these. She said see how you go. And I'm going quite good....

I: [Sounds like good management on your behalf.

On her behalf. I am very grateful. Very grateful to all of you hey. For this year. Yes, this is great this. They get you in and this is just great. She's really good because when I was getting all them spasms really, really bad all the time, she picked up that I was getting these tablets from here and they were too strong. And then she came and told me, she said you know you're not going to get those 40s, so she gave me 20s or 10s I forget now. At the time but it made a difference. She picked it up.” (patient)

Patients Knowledge and Understanding of Medications

Education on medications was not just undertaken after a medications review or if patients had problems. The IPAC pharmacist actively educated patients about their medications. One way that the IPAC pharmacist worked with patients was to co-design a medications list (see Figure 16). This education tool was a list of patient's medications, that included a description of medication, when it was taken and what the medication looked like.

Figure 16. Example of the patient medication list.

Patient Name: XXXXXXXXX
DOB: XXXXXX
Address: XXXXXXXX
Phone: XXXX

Regular Pharmacy:

MEDICATION LIST

Last Updated: 3/6/2019

Medicine Name	Brand Name	What this is used for	How to take	Morning	Noon	Evening	Night	Special Instructions
Atorvastatin 80mg	Torvastat	Cholesterol	In Roll Pack	1				Big White Tablet
Metformin XR 1000mg/Sitagliptin 50mg	Janumet XR	Diabetes	In Roll Pack	2				Big Green Tablets
Metoprolol 50mg	Metrol	Heart Rate	In Roll Pack	0.5				HALF
Perindopril 8mg	Indosyl	Blood Pressure	In Roll Pack	1				Green Tablet
Pantoprazole 20mg	Sozol	Acid Reflux	In Roll Pack	1				Yellow Tablet
Vitamin D 1000IU	Vita-D	Vitamin D Supplement	In Roll Pack	1				Clear/Brown Capsule

Date: 3/6/2019
Prepared by: IPAC Pharmacist (AHS Pharmacist [Health Service] Telephone

[Health Service]

Patient Name: XXXXXXXXX
DOB: XXXXXX
Address: XXXXXXXX
Phone: XXXX

Regular Pharmacy:

Allergies & Adverse Drug Reactions

Date of Reaction	Medicine / Causal Agent	Reaction
Nil known		

Recommendations to your GP

Issue	Recommendation

Please bring this medication list to any appointments you may have with your GP, pharmacist, at hospital, or with any other healthcare professional.

If you have any questions, please phone (xx) xxxx xxxx and ask for IPAC Pharmacist

Date: 3/6/2019
Prepared by: IPAC Pharmacist (AHS Pharmacist [Health Service] Telephone

[Health Service]

The IPAC pharmacist worked with the patients to determine how they would describe the medications. For example, one patient called a purple table “dusty rose” so that was the description made on the medication list (observation). The medication list had been adapted by the IPAC pharmacist from another IPAC pharmacist. It reported took a bit of time to compile and could not be generated automatically from the CIS. However, it was worth taking the time to develop as the patients saw a lot of value in it.

“I have made a medicine list template which would be good if it could be generated from the clinical information software and instead of me typing it all out manually. But the patients love the medicines list that they get because they could put on their fridge, they can have it in their bag. It's a nice tangible thing that they can take away as well, instead of just talking to them all the time and they're like ‘oh she told me so many things and how do I remember it all.’” (IPAC pharmacist)

Patient adherence

Staff saw that through her expert medicines knowledge and rapport building that the IPAC pharmacist was able to facilitate patient adherence.

“We have one diabetic lady who was seeing [name of doctor]. She took herself off her insulin that [IPAC pharmacist] and I have been visiting and she's gone back on her insulin. She was just taking the tablet but not the insulin. So, she's gone back on her insulin. To me that's...” (AHW) “That's a win.” (Director Health Services)

Patients were also being more honest and telling the IPAC pharmacist how often they took their medications.

“And as it's been said they [patients] don't always tell you. They are not going to tell you, ‘no I am not taking it at breakfast because I don't eat breakfast’. But a lot of people are, I have found, are a lot more willing to tell [the IPAC pharmacist]. I had a girl who was on Warfarin and she's not taking it and I have asked her a lot of times. I [asked] ‘is there any way we can make it easier?’. And eventually one day she told [the IPAC pharmacist] she had PV [per vaginal] bleeding. And that is why she will never take her Warfarin. And even though being a female doctor and young as well. She's not [telling me]. But it was when she was talking to [IPAC pharmacist] [she told her].” (GP Reg)

The IPAC pharmacist had the time to explain brand changes by the dispensing or community pharmacist; especially if tablets looked different to the patient's normal tablets. This is an example of an education strategy that would help with adherence.

“And just you know pharmacists love buying the cheapest next brand of Coversyl. So, there's like seven different types of Coversyl they put in their Webster Pak and I have had that many people come in and say I'm not these, shouldn't be on these pills, and I say yeah it's the same one, it's just a different colour. But no one bothered to tell him, they just put a colour in, and they go ‘Oh what's this pill’ and they won't take it. They're suspicious. They don't take it. And then you know it was only the other day, a medication change, someone should have told them ...” (Medical Director)

Patient Case Study: Bobby

“I'm back on track again”

Bobby is his late 60s. He grew up in [town] and has been attending the ACCHS for twelve years. He has diabetes, back and wrist pain, issues with his prostate, gout... He has had medication adherence issues in the past, particularly as some medications affected his sleep:

“And then also every now and again I'll drop my gear [stop medication] and see how long I can last. ... So, there was one [tablet] for me depression, there was a tablet in there [Webster Pak] and I was picking it out and throwing it ...”

Although he has been on a Webster Pak for about 12 months, Bobby still sometimes finds it difficult to manage his medications: *"I'm behind because sometimes I go bush and I forget a couple of days and then I come back and I am a week behind ... "*

Bobby met the IPAC pharmacist at the "Work it out" group. This was an effective way for the IPAC pharmacist to meet patients. Bobby was very enthusiastic about the group:

"We do an hour exercise program at the gym tailored to chronic disease patients' needs. And then we do an hour education session. So, [the IPAC Pharmacist] has come along and did education sessions with us on the importance of medication reviews. We've had the clients come in and do medication lists and reviews with the [pharmacist] and everything." (AHW – observation)

Bobby appreciates how the IPAC pharmacist took the time to discuss his medications, particularly as he has had to see many locums over the years:

"... you get doctors they'll say oh we'll put you on this, but you are in and you are out. You know what I mean, you sort of get a brief idea of what it does but, ... there's a couple of the doctors they'll pick up so you're some of your pills you know and they explain what this one does and that one does and what you need this one for. ... Because you know doctors, they sort of haven't got the time."

I went to see her about a revision and yeah we dropped a couple [of medications] off. Took some different stuff. She recommended one medication I was on before, all these locums come through here they'll take you off this for your blood pressure and then you don't sleep. Then you ask them for a sleeping tablet. So it has just been really good., I dropped off a couple...

Bobby outlines how working with the IPAC pharmacist was a collaborative process:

I've seen her a couple of times. ... she sits down and she more or less asks you... 'do you know about all of your medications that you are taking?' I said 'no not really. I know this one is for this.' And that's when we started discussing whether some overlap and could start creating other dramas or whatever, so we worked it every week and brought them all up and just started working through it.

Bobby saw an immediate impact on his wellbeing after adjustments to his medications:

[my] prostrate tablet I've got to take it every night and if I don't I'm in big dramas. And if I don't take my blood pressure tablet at the same time, I'm even worse, like for 16 hours, I don't know if you've ever been busting for a pee for 16 hours or something. Awful. ... That's all fell in line, so you know it was really good.

He also feels he understands his own medication and is "back on track". It turned out the medication he thought was for his depression and that he had discarded was for his blood pressure: *"and it turned out it was one of my blood pressure tablets. That was why my blood pressure sort of come back up again. [The IPAC pharmacist] explained that all to me."*

Bobby explains how he now better understands his medications and the reasons why he must take them:

"she sits down and yeah goes through that with you and then if you've got any questions or whatever she will tell you the function of what it's meant for and supposed to do. It was really good. The last six months I've been really happy. And you know it's a real benefit and its long overdue you know. You can understand some of the stuff you know for this and that but some of them inter-mingles and affects something else in some other way and that's what you're not clear on. Anyway, we have looked into that. My blood pressure's under control now ... straight away it just started dropping like that, so it's nearly back to normal. So I'm back on track again."

He appreciates that the IPAC pharmacist has more knowledge and time than doctors to discuss medications:

“you know like from what I can see all her job, from what it’s done for me and we are all ignorant of medicines you know doctors they say take this and you’re only in there like 15 minutes at the most. Take this and see you later especially like here we got that many flying through locums. ... from what we spoke about [it has given] me a better light on what everything does and what the tablets do and where it could go either way you know. Interact with other ones ... I reckon it’s a good idea and really I think if anyone’s on medication, like I don’t know how many tablets I’m on, seven and it’s probably 13 a day and to sit down and talk about them ... it’s definitely of benefit.”

He understands his medications and feels he can now discuss his medications with doctors:

“like yesterday they had to make an adjustment I got to drop one pill off starting today and then they are going to monitor my blood pressure to see how it’s going, but now I’ve got a bit more understanding. But you know if have something else happen, like I get on another tablet, I’ll be asking where it’s going, what it does.”

As his life improved so much Bobby would highly recommend the IPAC pharmacist to others including those from the ‘Work it out’ group and in the community:

*“in my group and different other people, I tell them. Go and have a revision of stuff and explain it to them what I have been through ... I honestly think ... at least one time a year people should be recommended to go and see her you know like make it a statutory visit all that stuff that I see the benefits that I’ve picked up **and now my management of medications is better, my life’s better and so if it works for me, it could work for someone else.**”*

He sees the inclusion of the pharmacist in the primary health care team as long overdue: *“this should’ve happened 30 years ago I reckon you know.”*

Educating staff around Medicines

Another core role around patient care was the education of clinical staff around medications.

“From a junior doctor perspective [the IPAC pharmacist] was really helpful in educating me with a lot of the patients who are on lots of medications and the interactions. It was very handy to have her close by just to run things past her and get some information and also to then have her spend time with patients educating them on things as well. A lot of patients have said to me ‘I’ve been on these medications for so long. I don’t know what they do’. And [IPAC pharmacist] would spend the time with them just so they understand. And [she is] also very helpful with de-prescribing as well.” (GP Reg)

“She’s picked up on so much ... For instance you know we had a gentleman. He was like pretty much given multiple tablets for the same thing. And she was able to fix that ... take it back to the doctor and have a yarn with the doctor It like they’re [the patients are] taking ownership for their health. You know it’s good to see.” (AHW)

Some of the suggestions to medication changes were made informally, and changes would be made by speaking directly with the doctors:

“So, if you just see something that you think should be actioned straightaway and the doctors are very, very happy with that.” (IPAC pharmacist)

Changes from a formal medicines review were made through Best Practice as there were significant notes. However, the IPAC pharmacist had to proactively approach GPs, as only regular doctors had messages sent to their inboxes and GPs also received a great deal of mail:

"Other processes with discharges are they get uploaded to the GP inboxes in the medical software and I sort of find out which doctors that they're getting allocated to and approach them directly because they get a lot of inbox things and medication changes are sometimes missed. So just to have my finger on the pulse to make sure that these changes happen, if the GP agrees with them, and the renal ones is, there's a whole process where I attend the meeting and I write notes from it and come back and report them to the GP, but also the hospital pharmacy has a medication change form and I help to make sure that those all get uploaded to the patient files so that they are documented." (IPAC pharmacist)

When asked how often GPs took on board the recommended prescribing changes; it depended on how the recommendations were discussed

"If I directly talk to them about it, it would be like 100 percent of the time. If I know that they have understood what I've written down and they yeah, they would, they've taken on all of them. It's the ones where I've made recommendations but I'm not sure if they've seen it or if they don't agree, that I haven't had that sort of feedback they're like 'Oh I didn't think that that was appropriate' or maybe they just didn't look at it." (IPAC pharmacist)

Organisational/systems changes

Although the ACCHS provided section 100 services from four clinics, the service had never had a non-dispensing pharmacist prior to the IPAC pharmacist; and the Director of Health Services and Medical Director stressed that there were organisational, systems and policy changes that were required before the role could be fully utilised. The systems changes took several months to establish and required about 0.5 FTE of the IPAC pharmacist's workload. The Director of Health Services felt that this was a particularly important role and discussed with the IPAC pharmacist this should be the focus of her role initially:

"From a project perspective what the intent of it was, was for it to be more client focused around quality use of medicines and quality prescribing and that kind of stuff. And I think we're finally kind of six months, seven months in actually getting [IPAC Pharmacist] up to that point. But what we have to acknowledge first was that being such a big service across five different centres in four different communities there was a whole heap of systematic stuff internally that we needed sorted out first. Given that we're providing section 100 services out of four of our sites. We needed, ... the pharmacist's eye over what it was that we're doing and that took up at least the first half of [IPAC Pharmacist's] workload. Now that we've started to get those systems in place and the management supported those systems, [IPAC Pharmacist's] actually finding time to spend with patients which is great." (Director Health Services)

The IPAC pharmacist was on the Clinical Governance Committee of the ACCHS which had just started when she arrived. She also sat on the joint Clinical Governance Committee of the local hospital and health service with the Director of Health Services and Medical Director:

"I sit on the [health service] Clinical Governance Committee as well as the joint clinical governance [committee] with the hospital and health service who have they have a tripartite agreement with the Primary Health Network as well, particularly for [three remote communities] So that's been something new that's been implemented since I've been here, and I was invited to be on that as well." (IPAC pharmacist)

The IPAC pharmacist's involvement at a wider regional clinical governance level was an important role given the changes occurring in the ACCHS such as taking over the provision of health services in remote communities. In a meeting in March the IPAC pharmacist discussed pharmacy guidelines for joint Clinical

Governance Committee. The IPAC pharmacist showed the committee the legislation around prescriptions and stressed that while in remote areas there was easy access to medicine for health professionals, supply needed to be done “the right way”. As part of clinical governance committee of [the health service] the IPAC pharmacist was helping to develop a scabies protocol. This was described as a passion project of the head nurse at the health service. While the IPAC Pharmacist reflected that this task could be seen as outside of the ten core roles of the project. She reflected that it linked in with chronic disease due to the connection with rheumatic heart fever.

Quality / Judicious Use of Medicines

Another key systems role was the quality use of medicines and the judicious use of medicines. This was essential in remote areas where there is legislation regarding which health professionals can supply and dispense medications.

“Then I suppose the other things that I’ve worked on to do with policies and governance and things like making policies around quality use of medicines. (IPAC pharmacist)”

“... the quality use of medicines and judicious use of medicines from an organizational level making sure that we have access to medicines in all of our sites, making sure that we are giving people the most up to date best evidence for different disease states, different antibiotics, just using medicines in the best way that they can be used, and then just a bit of governance around medication use as well. Because no one’s ever been in this position before, there’s not much that, prior to me starting, there was no governance on medications and that’s really big in the other areas in hospitals, like in metropolitan areas there’s a lot of focus on that but out here it just hasn’t, there’s never been someone to do that before. (IPAC pharmacist)”

The IPAC Pharmacist worked closely with the Medical Director. Given the current environment in the service with many locums, some who had never worked in remote areas, the Medical Director appreciated having an expert in medicines to work with and to give up to date information.

“My job is better quality and safety. What I have found is [IPAC pharmacist] she is like a dog with a bone. She keeps emailing me until I do it [change prescribing]. It’s good to have someone else interested in quality and safety not just put up with the rubbish [inappropriate prescribing] that you see. No, I don’t know why AMSs, the doctors that come to AMSs suddenly can’t prescribe PBS items and how little people know about the Aboriginal PBS items and continue not to use them and are totally unaware of it and come to work in these places. So, I don’t know where there is a role for educating doctors before they get here or when they get here. I don’t think [IPAC pharmacist’s] got enough time to do that. You know doctors don’t like being talked to by pharmacists in general. The old school doctors ... they still want to use their old drugs and stuff like that. It’s hard to make people change.” (Medical Director)

There was a need to educate locums and new staff about the correct management and evidence-based use of medicines:

“For me you know I’ve been making her work hard in the clinical governance roles. So together we have got rid of Bactroban which is incredibly hard to stamp out, but we just didn’t want Bactroban used any more. And you know so polices that like she does and that’s good. And then stuff like head lice, we’ve changed all the head lice management. We got away from the drug-based stuff. So, bit by bit we’re just getting people to use the correct stuff or evidence-based [medicines]. We had one doctor who loved Sudafed. I don’t know how many times we’d tell him not to write it, he still writes it. She’s trying to make people use evidence-based medicine but it’s amazing how people don’t read emails.” (Medical Director)

“...antimicrobials stewardship as well and especially with a lot of locums that haven’t given Bicillin to kids before for skin sores.” (GP Reg)

"We had a doctor from the Northern Territory who questioned the use the Bactrim for skin infections. I'm thinking 'Where have you been hiding?'." (Medical Director)

The IPAC pharmacist worked with other staff on developing other policies and protocols. The Medical Director was undertaking an audit of warfarin; described as his *"passion project"*. He was undertaking this during the observation and came in several times to consult the IPAC asking *"does this patient need to be on warfarin?"*

Another example was recalling patients for injections. The IPAC pharmacist initiated the system change and worked with the nurses and reception staff to develop an efficient protocol.

"There were issues of recalling patients for injections ... when a patient comes in, the receptionist will put an injection on the [CIS], and she said 'how does the nurse know which injection?' because she said 'there's some patients that are on three types of injections. How do you know which one they are coming for, because what I've seen is they're actually missing them' ... So then we were able to sit down and come up with a system which was really good. ... These are quite hard patients to find, so she identified that and rectified it." (Nurse)

The IPAC pharmacist is involved in a working group to look at the costs of medications for renal patients:

"...there's a lot of drugs that renal patients require. They are very expensive, and the hospital just says oh go down to [health service] and get your free everything. You know we have to look at our budget for pharmacy and [Director Health Services] has got a little working [group] on that." (Medical Director)

The IPAC pharmacist had worked with the hospital to ensure a supply of some medicines is available through the ACCHS:

"...things like that are really expensive drugs. And you know the hospital says here you go [health service], you look after these patients... So today someone wrote a patient [a script] for Tamsulosin, a prostate drug which is like \$70 for a script. What do we say then, you can't have it, you've got to go back to the hospital get it through the hospital? You know so we, being a nice friendly AMS, we pay for it. You know they should be more mindful of those sort of drugs when they write them and they don't and [IPAC pharmacists] been pretty good at trying to get some of those drugs (for patients) through the hospital and then getting them sent down here and storing them in the fridge here so that they can be given here and it's all about the patient really rather than the money, which I like. But it's bloody hard you know." (Medical Director)

Relationships and Collaboration with other Providers

Relationships with community pharmacy

The IPAC pharmacist had a strong working relationship with the community pharmacies, built on her previous work. They sometimes spoke *"multiple times"* a day about patients' medications.

"I think it's been very productive between everyone. The community pharmacy I hope has seen this as a helpful person to be within the service. There was certainly no, bad blood, because I left or anything like that, that was not a not a problem. And also, even now I've had a relationship even with their competitor but they are, the other pharmacy in town, is linked with [health service] as well for some of our nursing home patients. So, I've had to sort of branch out as well to make those connections too and they email me with their script requests and things like that because they have seen someone here before." (IPAC pharmacist)

Working with the hospital

The health services' relationship with the hospital had previously been challenging; particularly around communication about medication changes on discharge. The IPAC pharmacist worked with the Medical Director on transitional care, particularly for the renal unit patients:

"There's been a lot of work that I've been doing with probably the core roles of transitional care between discharges from hospital and coming back into community and also probably with the renal unit is probably a really big one as well. We've been trying to improve the communication between the renal unit and [the health service]. They have medication changes really, really, regularly and in the past [the health service] has been bypassed in that step for medication changes and they've gone straight to the community pharmacy which makes it tricky when the clients come to [the health service] for general GP services and ...their medication list has not been reconciled. So, it has caused issues in the past and that's something that having my pharmacist focus on medicines but then also chronic disease, so someone who's getting dialysis certainly falls into my scope of what I can do." (IPAC pharmacist)

The Medical Director had taken the IPAC pharmacist to meetings with palliative care staff, and to "renal meetings, blood meetings". Loss of information around medical changes was particularly challenging when there were many locums; so, a system needed to be developed:

"I've been working pretty closely with [IPAC pharmacist] and you know the amount of information gets lost somewhere between the hospital and here and specialists and here, and medication changes that should have been made, actioned. I think a lot of it is our locum doctors don't have enough regular solid doctors. People just have to learn very quickly, and it doesn't work really. So, a lot of stuff gets missed." (Medical Director)

The IPAC pharmacist was able to liaise with the other health care providers and ensured there was a process so that the changes were known:

"But also liaises with the hospital along with those medication changes for discharge patients and having her on the floor is really good to kind of like she will update everyone with information she gets from the hospital or rang or meetings also." (GP Reg)

"A lot of our patients that have lots of medication changes on discharge, the pharmacist there liaises directly with her. She'll go through it see what the changes are, highlight them and then find the doctor that looks after them." (GP Reg)

"Other processes with discharges are they get uploaded to the GP inboxes in the medical software and I sort of find out which doctors that they're getting allocated to and approach them directly because they get a lot of inbox things and medication changes are sometimes missed. So just to have my finger on the pulse to make sure that these changes happen, if the GP agrees with them, and the renal ones is, there's a whole process where I attend the meeting and I write notes from it and come back and report them to the GP, but also the hospital pharmacy has a medication change form and I help to make sure that those all get uploaded to the patient files so that they are documented." (IPAC pharmacist)

The IPAC Pharmacist also ensured that renal patients had the correct medications when they were in [town] for "performance": *"as well as organizing renal stuff for patients that have come over up for performance that means for dialysis while they are here who haven't brought anything with them. So [IPAC pharmacist is] organized to make sure they have the bags and everything that they need while they are here for a short period of time."* (AHW)

The IPAC pharmacist was also involved in other activities on occasion that were outside the core project roles including helping other agencies with processes for medication management.

"She also, because I got assigned to the [alcohol and drug] recovery centre at the beginning of the year for a few months and so I dragged her along with me to help me. Because their medication like how they dispense it and all that was so dangerous out there and so she was able to fix that as well. So, she sat down with them. We all sat down together and fixed that within like a month. She had proper medication charts and then they had trained up their staff ... amazing." (Nurse)

Project - Enablers

Overall value of IPAC pharmacist

Both the Medical Director and the Director of Health Services said that they could not imagine being able to run the AMS without a pharmacist as part of the primary health care team. This sentiment conveys the value of the role and the understanding of the scope of practice.

"To me, I don't think an AMS can work without a pharmacist." (Medical Director)

"We'll get to the end of the project ... we've already identified that we can't function as an AMS without a pharmacist. So, the project stops. We then have to try and find the money to continue with that work, which is really hard to do there." (Director Health Services)

Staff and the IPAC pharmacist felt that the ACCHS could have two full time pharmacists working, due to the amount of chronic disease in the community. One pharmacist could cover [town] and the other the remote communities. The IPAC Pharmacist also felt that the role could also be supported by a health worker to assist with visits. The Medical Director stated: *"but you know two pharmacists wouldn't be enough really, to convey all that information for the amount of chronic disease we have."*

Having the right person

Both staff and patients agreed that the IPAC pharmacist was "the right person" for the position. She had the local knowledge and connections, cultural awareness and the right personality to undertake the role. The research team observed close and congenial relationship with all staff. The IPAC pharmacist had an open-door policy with doctor, nurses, and AHPs. It was commented that the position would not have worked without these traits and experiences:

"This discussion could be a very different discussion if it was a different pharmacist. So, the success for [the health service] of this project is at least in part if not marginally about [IPAC Pharmacist] and her personality and professionalism" (Director Health Services)

The pharmacist was also **persistent**, **"very resilient"** (DHS – FG) and **proactive**. There were a number of setbacks at the beginning of the project at the site. The IPAC pharmacist started late (in November); was unable to join the other IPAC pharmacists at an off-site induction and there were significant board and staff changes at the clinic and service. Due to the changes, clinical staff did not know she was coming or her role:

"So, it was really up to me to sort of introduce it at things like the morning meeting or in-services and that took a long time because of the staff changeovers." (IPAC pharmacist)

"I think the next person is going to obviously have an easier run. But to me it's getting that respect which you only earn through good work and stuff. To me we see a lot of people come and go with these projects. Some are good. Some are not so good. Some of them you never remember again so ... I think you need to be careful how you put that person into an AMS and probably need to look at the AMS before you just put them in there and where they are. ... A lot of people would have run for their lives if they were put in the same position as [name]. And they would have just thrown in the towel and gone nope can't do this. I think a lot of people do in remote. ... I think she obviously got massive

support around her from being in community for a long time. She's got ties everywhere. So, she's the ideal person for that job.” (Medical Director)

Having someone with the right “organizational fit” and right personality was important that the skills and experience.

“Yeah absolutely. Because you can look at somebody’s experience and qualifications and all of that kind of stuff. But the important thing you need to factor in when you're looking at stuff for AMSs is organizational fit and are they going to fit with the team. And that's more of a personality trait than a skill set. Something that you can't learn from. So, we were lucky with [IPAC pharmacist].” (Director Health Services)

“she thinks outside of the box.” (Nurse)

Previous relationships and links with the hospital help bring different services together and build better relationships:

“She's got a lot of connections all over the place. So, it's really good. We struggle with the hospital.” (Nurse)

The pharmacist understood the nuances of the role, need to develop relationships and build rapport and to be flexible:

“I would say that, don't rush the process. Don't go too hard too early. Make sure that you are present. I think that that is a huge [reason] why I am starting to feel valued is because people are coming to me now because I've been here. I think this role would have been really hard for someone who moved to [town] for this job and to come into this place with no knowledge would be nearly impossible.

“I think communication skills; I would say a huge one. I think you've got to be flexible and adaptive to what happens... you've got to kind of work with what you're like given and you can't expect that your day is going to be exactly how you put it in your appointment book. ... It's not going to be that and you're going to get a call from someone that has come from [remote community] and then gone to [urban centre] to get their fistula for dialysis, and then they come to [town] and they are starting dialysis and then they need medications but they need all of this other stuff and then that's a bit of time to figure all that stuff out. ... every day is really different. So, it's, you've just got to show up and be there. Go with the flow.” (IPAC pharmacist)

The IPAC pharmacist perceived that clinical skills and being HMR accredited were not essential to the role:

“The clinical stuff, I would say it will all come to you. You have, all the resources that you need. ... I think that my job is still successful even though I'm not HMR accredited. I'm doing [the accreditation course] because I want to learn more. I wouldn't say that if I was interviewing someone and they didn't have it, I wouldn't give them the job.” (IPAC pharmacist)

Flexibility of being able to use the project as Service required

Managers at the ACCHS felt that there was flexibility in how the IPAC pharmacist role could work at the service. For example, focusing the role on systems issues in the beginning; and setting up processes that would allow the IPAC pharmacist to focus on patient centred care:

“We needed to have that flow in our clinics before we could say ok well now we can effect patients through. And I think the project flexibility to allow us to use [the IPAC Pharmacist] in that fashion is definitely a winner. If we hadn't have had that flexibility, [the IPAC Pharmacist] might have spent six months sitting here in the clinic twiddling their thumbs whilst she waited for that to build.” (Director Health Services)

However, there was a tension between the flexibility and autonomy, at times the IPAC Pharmacist felt that she would have liked more direction in the role. This may have been because she did not attend the formal induction with the other pharmacists as she had started later:

"There was a lot of autonomy in what we were doing which makes sense because all the services are really different. But it also meant that there was not as much structure for the role and what we were trying to achieve. I guess they did want it to be we make it our own, but that was hard with all the different types of experience that people have already had so I think there could be more support there." (IPAC Pharmacist)

A theme throughout this case study was that due to the health services remoteness, the number of clinics and recent organisational and workforce changes; the IPAC pharmacist needed to work outside the scope of the 10 core roles. Some procedures and processes needed to be established prior to the IPAC pharmacist being able to focus on patient centred care. Health services needed to **co-design** the role to taking into account local situations:

"I think the project needed to be tweaked for services. We're not one facility. And I think the project had in mind one facility, [with the] pharmacist in there with their own clinical space being able to see a throughput of patients. But we are not one facility, we're five facilities across the size of a small European country. And that needed to be taken into consideration." (Director Health Services)

IPAC pharmacist also commented that some roles could not be undertaken before policies and procedures, such as supply of medicines were established:

"So the first bit of time was just sort of shuffling around between the two clinics also going straight up to the remote sites visiting them physically because there was an instruction that we needed to get those things sorted ... as part of the pharmacist role, which was making sure that there was a supply of medicines and like a consistent supply and a quality supply of medicines to the outreach sites because they don't have, they didn't have clear lines of like pharmaceutical access." (IPAC pharmacist)

Managers perceived that, 'while not in the project brief' this flexibility was allowed:

"Well I felt bad, you get these things saying 'how is the project going?' And we are actually doing other things as well. And it made us feel bad that we are not using [IPAC pharmacist] in the correct perfect way. But [the Project Coordinators] didn't seem to worry too much." (Medical Director)

"The discussions that I've had with [NACCHO project coordinator] were "I know that [IPAC pharmacist] is not doing project specific work but this is work that we need her to do so we can get ready to be able to do the project'." (Director Health Services)

The IPAC pharmacist worked with other staff in the remote sites to develop imprest lists for the remote clinics, and also with a private community pharmacist based in a remote town, that serviced two other remote towns, where the ACCHS had clinics. The community pharmacist was new to remote work and the IPAC pharmacist provided support for the pharmacist through developing sustainable systems for tracking stock and obtaining further medication supplies which benefited the ACCHSs patients as their medications were in stock.

*"I suppose the work that I'm doing with our **remote sites**. None of those patients are consented to IPAC so they're not patient focused activities. The way that sort of came about as part of the project is that people need their medicines so we can't even start to treat chronic disease if they don't have access to their medication. So that was sort of the theory behind doing that sort of work, but it did not fit in with an exact ten core roles and also [there were] no consented patients in those areas."*

Project - Challenges

Changes at health service

Changes to the service and to staff had been a constant challenge for the entire time the IPAC pharmacist had been employed. The ACCHS agreed to be part of the IPAC project under the old CEO and on arrival the IPAC pharmacist said *"no one knew I was going to start or what I was here for."* (IPAC pharmacist)

"...when I showed up on that day...[they] didn't know that I was going to be here. So, there was very little, if not no understanding of what I was doing except for maybe up at the really high management who had said yes to the project and they had those discussions already in that introduction. So, it was really up to introduce it at things like the morning meeting or in-services and that took a long time because of the staff changeovers." (IPAC pharmacist)

"It was just always changing from then on. I think I've had five or six line managers in my time here and there's been one big restructure and then different role changes within that as well. ...When I first got here I didn't quite understand all of the intricacies of the organization and I was trying to figure out for myself how to navigate through." (IPAC pharmacist)

There were three other issues that impacted on the project. Firstly, a manager from the service felt that they did not have adequate input into the recruitment of pharmacist:

"And look I think that that was partly luck as well because I mean we weren't involved in the recruitment process either so that was done through NACCHO." (Director Health Services)

Secondly, the service was 'not ready for the project'. Therefore, the IPAC pharmacist had to be quite assertive. There was a tension between the needs of the project and the needs of the service:

"Well when I first got here it was just there wasn't that much of an introduction. I think the manager who was here at the time had no idea that I was." (IPAC Pharmacist)

"I'm not sure if [health service] and the project had the same expectations. So I think the CEO who was first approached to do the project changed [in] June/July last year. And then a new CEO came on board so I'm not sure if the project had already started and in the works and then the new management has come in as well." (IPAC pharmacist)

Clinicians were not sure what her role was and how they were meant to work together:

"I think one of [the IPAC pharmacist's] problem was she just got dumped into this really. We had no idea what she was really going to do and I think we made a lot of it up." (Medical Director)

"Even the IPAC pharmacist's line manager didn't even know much about the project when she first started either." (Director Health Services)

Thirdly, there was not as many patients currently coming into the service and when they did present opportunistic care often mean patients were overwhelmed. The IPAC pharmacist perceived that community dynamics meant that sometimes fewer patients attended the clinic:

"And then when they [patients] were here because they weren't coming as often... they were already trying to do everything else... if they have already been here for three hours and then I'm sort of trying to tack on to the end of that it was like, do I have to? And of course not. So, if there was an option there to, to leave then they would definitely take it." (IPAC Pharmacist)

Workforce retention of GPs

Due to changes in the health service and staff, the IPAC pharmacist had been at the service longer than most of the medical and nursing staff, a unique position, different than at the other IPAC sites.

"When I started we had lots of locums as well. We weren't familiar with the patients or medications and whatnot. So [IPAC pharmacist] was actually one of the stable people that was around all the time. She would have seen patients before and she knows them and can tell me about what their medication issues are before I meet them. So that was really helpful. I assume other places don't have that luxury." (GP Reg)

"...staff retention seems to be very tricky particularly in this in this area in [description of area] just because it's so remote. Since I've been here there's been a couple of regular doctors come and go and also lots and lots of locums. So, locums spanned from one week to probably three weeks that they're here for and the longest regular doctor [GP Registrar] that's been here, has only been here for six months and ... today is her last day." (IPAC pharmacist)

"with staff changes for one and then restructures and different people coming in, I feel like I'm explaining what I'm doing weekly if not more. And I think that's been a bit of a barrier to the success of the project because there's just been not enough consistency in it. ...At the start of the project I was working between the two clinics and then I would get asked to go on a trip up to one of the other sites and then I come back and there's not a room available. So, if I'm not here at all times, then I guess because, because all the other staff are changing all the time ... and they just forget that you're here." (IPAC pharmacist)

Locums may have misunderstood the role, as pharmacists are often stereotyped to dispensing behind a counter.

"You know you got all these stereotypes that you expect from people's roles. There is never just a pharmacist wandering around talking to you. That's a bit much you know. Normally they just stand behind the counter." (Medical Director)

"There's some people who are who are here to do the GP service that they are getting paid for and not to sort of branch out into other areas of [health service] that are available. There's also doctors who come here that may not see the value in a pharmacist and there's also at some points in time, two [pharmacists] here, so they don't know that I'm part of [the health service] and they're part of somewhere else. We're both just pharmacists so they might go to the pharmacist who's sitting in the pharmacy because that's where the pharmacist normally sits." (IPAC Pharmacist)

The IPAC Pharmacist felt that she was not working to capacity as not everyone understood her role.

"[I'm not working] to the full capacity that it deserves. I think that they understand that I know about medicines, that I can talk to patients about medications and do a review and all of that kind of thing but I don't think that they quite ... grasp how big this could be or how important it could be." (IPAC pharmacist)

She also did not feel like she had been able to fully utilise her skills and expertise.

"at the start it was it was tricky to sort of even figure out what I was supposed to be doing. Yeah. Yeah. So just trying to make myself as useful as possible but certainly now there's lots more sort of people coming in asking me questions. I suppose it's been a little bit different as well because there was a pharmacist based here a couple of days a week already for the supply side of things. So, the general before I got here just sort of little medicines questions would go to them. So 'oh what should we do for this' or 'can we do this or do you have this' one whereas like all of that stuff is in the Medicines Information core role, is all those little things like drug availability on the PBS, or pricing or

just if it's available or if it's out of stock, all those little queries would go to the pharmacy because that's been here for 10 years. Yeah. And so that was a little bit unique to this service.” (IPAC Pharmacist)

As there were not as many GPs in the service, there were not as many patients receiving advice and management of their chronic disease. At the time of fieldwork medical staff consisted of the Medical Director and the GP Registrar (who was leaving that week) and two locum doctors. Due to the workforce issues, patients may not be able to see a doctor if they were a ‘walk in’ after 11am. Patients sometimes had to wait for lengthy periods of time.

“There's just something that I'd like to raise and it's not stirring or nothing like that, if you can make something better it'd be good. You know when you're waiting to see the doctor sometimes, it's taking forever. You know what I mean. Hours and hours and hours. Now you get some of these old people or anyone that's got the diabetes. [That] stresses you out and makes your sugar levels go up or down or whatever. Is there any way that you can look at? If nothing can be done fine but at least look at it.” (Patient)

Patients also commented on the change to staff and at the focus group and in interviews talked about medical professionals they had seen many years prior and the difficulty they had building relationships with locums:

“all these locums come through here they'll take you off this for your blood pressure and then you don't sleep.” (Patient)

While this has been a challenge, it has also had benefits. With locums and new staff not knowing the service without a pharmacist so the role is seen as an essential part of the team:

“... it's good we got rid of all the old school people and someone like [IPAC pharmacist] now she's there and we should keep her. We need to keep her in place so that the new doctors just assume that that's always been the way. Because to get respect is hard and you don't know what that person's jobs is you just ignore them or you don't see the value in them. ... when I'm not here, I'd like those processes to keep going ... I think that's the hardest thing you've got rapid turnover, staff problems and when we retire, these people don't know what the systems are and it's really hard to make and secure and so that people don't change them. I think we've had that many people come in and want to change everything. You know its hard thing for us when you sort of put all these processes in and someone goes oh I think I know better and that's really hard especially around pharmacy. we've the problem in the outlying communities, it's been horrendous.” (Medical Director)

Furthermore, changes had been made to the AHPs role, and they now had a wider scope of practice than the original AHPs when the pharmacist commenced:

“when I first started there was only two health workers and now we've got four. So, the two health workers stayed in the clinic. One of them couldn't drive which meant that they didn't ever go out. They were just too busy to go out. So that meant that if I couldn't reach someone on the phone, there was no other way to see them.” (IPAC pharmacist)

Space/clinical room

Not having a dedicated clinical space was difficult, particularly at the start of the project when the IPAC Pharmacist was working between two clinics.

“... at the start of the project I was working between the two clinics and then I would get asked to go on a trip up to one of the other sites and then I come back and there's not a room available. So if I'm not here at all times, then because all the other staff are changing all the time ... people coming in and out as well and they just forget that you're here.” (IPAC pharmacist)

At the main clinic she was located a room at the end of a corridor far away from the doctors *“when I was at the end room there were not as many opportune moments to see people or GPs.”* She then was moved to a room opposite the GPs, which meant she was visible and enabled the *“open door”* interactions, *“I moved to a room near patient waiting area. I will see people as they leave.”*

No HMR accreditation

The IPAC pharmacist was not HMR accredited, although she was undertaking her accreditation training at her own expense. This meant that the ACCHS could not bill for HMRs. The Medical Director also felt she was inexperienced in that area and being accredited would mean there was *“an official document saying, you should stop this drug”* as this had more credibility: *“this drug interacts with that because you know I think a lot of doctors don't really listen always.”* (Medical Director)

The ACCHS did not access HMRs with other pharmacists prior to the employment of the IPAC Pharmacist:

“There is one, now two local pharmacists who are HMR accredited. [The health service] is not super interested in utilizing them when they have me. They're sort of happy to forego the billing side of things because I'm within the service and we try to get that rapport.” (IPAC pharmacist)

In lieu of HMRs, the pharmacist undertook non-HMRs as part of the project. She would have liked further training in this area.

“The HMR process or the non-HMR process was really individualized and I'm not HMR accredited so I found that really hard to figure that bit of it out and come up with a process for that and things like recalling patients and the differences in software; I thought we could have a little bit more like training in best practice.” (IPAC pharmacist)

Project and limited funding/Sustainability

Underlying the project was sustainability. During the site visit many health services staff commented to the researchers that core funding was required for ACCHSs to continue the integrated pharmacist service. Some patients also commented that the service needed funding to keep the IPAC pharmacist. The limited time period and funding was a challenge, typical of projects in the sector.

“I mean my concern with those kinds of projects is that they funded for a specific length of time and it's almost like they're funded with the plan that they're not going to work, because there's no then plan for ongoing funding.”

...because AMSs and Aboriginal communities are used to this and why funding things. It's a project body part funding, you get it, it's like STI funding, we just lost our STI funding. We're in the middle of a syphilis epidemic and we had our STI funding pulled. But they get funded and all of a sudden government's got a new priority. A new you know thing that's going to win votes at the next election and that's not a priority anymore. And communities like well actually we really need that service. How do we continue to function without that particular service?” (Director Health Services)

Summary

The ACCHS is spread across five sites, including two clinics in town and three in smaller towns, considerable distances from the main clinic. The IPAC pharmacist at this ACCHS had worked previously in a local community pharmacy and was known to and knew the community. Although the ACCHS was not prepared for her role, due to changes and workforce issues, because of her previous connections, personality and persistence and resilience she developed the role, focusing on being the services' medicines expert.

The service adapted the role for their needs, initially focusing on developing systems and policies that would enable the pharmacist to practice and focus on patient care. The IPAC pharmacist had become an important and integrated member of the primary health care team. The pharmacist answered medication queries, educated health professionals and provided input into various committees to support the ACCHS and the

other local health services. She undertook medication reviews and was currently completing her HMR accreditation training to improve her skills in this area. The GPs valued the pharmacists input. The IPAC pharmacists facilitated communication and improved relationships with community pharmacists and the hospitals, particularly around discharge summaries. Communication was made easier due to pre-existing relationships the pharmacist had prior to the project.

The pharmacist had also developed good working relationships with the Aboriginal Health Workers and Practitioners, patients and the community. Patients and health professionals highlighted changes to patients' understanding of medications and adherence. A strategy to facilitate understanding used by the IPAC pharmacist was to co-design a medications list with the patient which included a list of patient's medications, a description of each medication, when it was taken and what the medication looked like.

Managers commented that the health service will continue to have a non-dispensing pharmacist role, citing that it was an essential role, despite the limited funding and time period of the IPAC project. At the time of site visit, the Health Services Director and Medical Director reflected on how they had managed to operate prior to the project and felt that their ACCHS needed the non-dispensing pharmacist role moving forward: *"I don't think an AMS can work without a pharmacist."* (Medical Director)

3.5.2 Case Study 2: Regional Health Service

"This shits me you know, you get a program and it works and bugger me dead if they don't pull the plug on it." (Patient)

Background of service

This ACCHS is located in a large town with the population estimated to be just under 80,000. Approximately 7.4% of the population identify as being of Aboriginal and / or Torres Strait Islander origin. Major industries include mining, tourism and horticulture. The town is classified as a RA3 according to the Australian Statistical Geography Standard-Remoteness Area (ASGS-RA)[67], and a 2 on the Modified Monash Model (MMM)[68].

The ACCHS was established about twenty-seven years ago. Since 2014 a change of service design from a disease-based central model to a decentralised clinic. This is a "hub and spoke model" with seven (7) clinics located in different areas. All the clinics have the same mix of teams with size of the teams being the right size for the population. The philosophy is that for continuity of care and patient services, it's better to have smaller clinics closer to where people live and is based on the Institute of Urban Indigenous Health (UIIH) model of primary health care (from clinical director interview). The 7 clinics are located around the town and include a women's clinic and a men's clinic. There are 17,000 registered patients and regular patients sit somewhere around 8,000 to 9,000.

The workforce is very stable, with no locums and one GP who has been employed at the service for over 20 years:

"We employ about 32 GPs but about 14 FTEs so we have a lot of part time GPs staff, and we have registered nurses, AHPs. We've got very highly rates of Aboriginal staff and each clinic also has an Indigenous outreach function. We employ a pharmacist in a public health role whose responsibility is to help us maintain imprest, to control costs because we are not eligible for Section 100 but to contain costs and to ensure quality use of medicines in [the health service]." (Medical Director)

"At any given time, we usually have anywhere from seven to 10 registrars across the board as we are a teaching practice." (Outreach Worker)

Profile of IPAC Pharmacists

One IPAC pharmacist (IPAC pharmacist A) had trained in Melbourne, but had worked in the state/territory for 13 years, in four different towns, and had extensive experience working with Aboriginal patients. While IPAC pharmacist A had mainly worked in hospitals, she had experience in ACCHSs, and had done HMRs for the service, as an external provider, for 3 years so had strong connections with staff and the service. She helped write the position description and advocate, find funding and recruit for the public health pharmacy position which exists in the ACCHS. She was HMR accredited and very experienced in Aboriginal health (including time as a renal pharmacist at a remote hospital). She had commenced her role in October 2018.

The other IPAC pharmacist (IPAC pharmacist B) was already employed at the service in a part-time public health pharmacy position. She had trained overseas and undertook locum work in North Queensland while on a working holiday. After a brief return home overseas, she moved to [town] and worked at the local private hospital for 12 years. She then commenced at the ACCHS two years ago (2017). Her public health pharmacy position in the service, prior to taking on the IPAC position, was non-dispensing and focused on governance, medical safety and audits. There was no patient-related activity within the previous role.

IPAC pharmacist A worked 5 days across 3 clinics (1.5 days at Clinic A, a half day at Clinic B; and 3 days at Clinic C). She was originally at Clinic C for five days but found that there were lots of RDOs on Fridays. Furthermore, it was about a 30-minute commute time to the clinic. IPAC pharmacist B worked two days a week in the IPAC role, 1 day at Clinic D and one day at the Clinic E, and 3 days in the public health role.

Relationships with patients and community

The Pharmacists had well developed relationships with patients and the community and were culturally safe. The community respected and appreciated the way both pharmacists developed relationships with patients and their communication skills:

"So she's (IPAC pharmacist A) built that trust and that relationship with them now. So you know and like anything you know word of mouth you know it'll spread with our Indigenous people." (Outreach Worker).

"I've never had any complaints from patients about [IPAC pharmacist B]. They always were really happy to see her and they were always there, everyone seemed very happy with her communication as well. There was never a situation where they [said] 'I don't really understand what she was saying'. I think she gave really clear advice to both the patients and to me." (GP-J)

Both IPAC Pharmacists understood culturally appropriate communication and developing relationships:

"I think really the pharmacists who work in our clinics really have a better understanding of the social situation of our clients and obviously it's much easier for the follow up for discussing things as well if it's someone that you have a regular have regular contact with at work." (GP-EF)

"You know I guess that's why I work in Indigenous health; you get as much out of it as the patient does most of the time. And that's a cool thing about IPAC actually, just for the record, is that I really liked being able to follow people up, because doing HMRs for so many years, it's just a one off thing. You might see someone again in twelve months if you're lucky, they're not going to remember you, you probably won't even remember them. You just don't get to close the loop, see everyone again, check how people going. Whereas with IPAC you have to find people again, which is good, because you know you build up those relationships. People see you more than once because as we all know, in any clinic situation but particularly in Indigenous clinic setting people want to build up rapport. They want to see the same person more than once. So I feel like I've really liked that part of IPAC, with that type of follow up You know people calling, ... they call direct to us now and ask questions about the medicines. How successful is that? I feel like happy days when that happens." (IPAC pharmacist A)

"... having, I think, a really gentle approach with patients. Patients would tell me that they're taking their medicines and see [IPAC Pharmacist B] and I'd find out, yes they're taking all their medicines but they're taking both their mane and nocte dose at one time and that's like that she'd get this very honest information out of them so as someone who's on the team for the patients she was just really great in that respect" (GP-ET)

Integration into the team

Both IPAC Pharmacists had integrated well into the PHC teams, despite working across different clinics. They were also part of the ACCHSs Health Systems Team. Both IPAC Pharmacists were familiar with the service, having worked internally and externally in other roles. They had been given a uniform and were involved in staff meetings.

"... it makes a big difference having the shirt. You are part of the team, you're one of the good guys. It's really good." (IPAC pharmacist A)

The IPAC pharmacists attended all staff meetings that involved every staff member across the clinics and gave education sessions. They also attended health systems meeting so that they could remind staff they were in the clinics.

"I was invited to the clinic planning day. So that really helped because I was able to talk about the project and push the services. Other than that, I think because I was already here as a pharmacist....

I was already kind of part of the team anyway, I wasn't coming in from outside. So I think that was a big bonus.” (IPAC pharmacist B)

Their integration into the PHC team was enhanced by constantly reminding other staff of their role and patients who could be referred to them:

“I think [we are] very well accepted Obviously the challenges of setting up a new service I think because it's never been provided before so it's not foremost in people's mind I don't think. So that was a challenge to start with just the constant reminding that we're here and we need referrals and bugging the clinicians rather than bugging the clients.” (IPAC pharmacist B)

Working across all the teams and with different healthcare professionals also assisted with the integration of the role:

“Because the outreach workers are [the] main contact for going with us on the home visit. So working closely with them there [also the] Care Coordinators. My first whole handful of clients from here was through the care coordinators rather than the GPs until the GPs kind of got up and running. So the care coordinator here was really supportive. We haven't got much allied health but in terms of the physio ... I've referred a couple of people to her and she's identified a couple for me and the social worker we would work closely with as well ... The whole team works well together.” (IPAC pharmacist B)

As they had worked previously with the PHC team it was easier for the pharmacists to integrate. There was also recognition that the pharmacist needed to be part of the team:

“I think we work more as a team in this service. I think the clients we have [have] very complex needs ... so people have so many chronic comorbidities that and we also know that managing chronic disease seems to be making a difference to survival. So I think it's essential that we keep providing ... quality medicines. So I think pharmacists are an essential part of the primary health care team and I think having them actually embedded in the AMS just means that the service is sort of individualized to the client. I just think it's a much better service when they can actually do that clinical sort of one on one with people rather than being at arm's length without having the individual contact. So I think if we want to keep trying to close the gap I think pharmacists need to be part of the team.” (GP-EF)

Patient recruitment

Patients were recruited for the project across clinics predominantly through referrals from GPs. The ACCHS did not want the IPAC Pharmacists “cold calling” people and so consent for the project was only able to be sought from patients who were referred.

“...people already have kind of a high burden so you [do not want] to harass anyone into it. Yeah but you know it worked well because then we knew that anyone referred was viewed as needing a medication review as well because how do you identify people in the waiting room as to whether they need a review? So we knew that everyone was appropriate and then, they needed the service anyway... I would do the whole review anyway because that's what they were there for and then at the end I ... do my spiel about IPAC and whether they wanted to consent. So it wasn't first up I feel like it wasn't putting people off as it wasn't first up. you provide the service anyway because that's what you're going to do and then at the end did you want to also be a part of IPAC.” (IPAC pharmacist B)

Key roles

Both of the pharmacists implemented the ten core roles of the IPAC project. The service already had a non-dispensing pharmacist to assist in development work on policy and systems level. Medication-related policies and procedures were generally in place, however, not directly included as part of the ten core roles.

Home Medication Reviews

Home Medication Reviews were a key role of the IPAC pharmacists. Both pharmacists were HMR accredited and had undertaken HMRs with Aboriginal and Torres Strait Islander peoples prior to the IPAC role. Having the flexibility to undertake the HMRs in the clinic, rather than going into people's homes was appropriate for a proportion of Aboriginal people. However, with the support of an Outreach Worker home visits were also available, depending on the needs of the patient:

"So I think it has allowed in fact before that we weren't doing any in-house HMRs or RMMRs. So they were being sent to other community pharmacists and actually from my point of view it's so much better to have it with our in-house people, much better. One because they know our clients, if there's clients who are sensitive or for whatever reason shy or whatever, they can take one of our family support workers or Aboriginal Health Workers out with them, but they can also see people in the clinic." (GP-EF)

"One of the things we've been really interested in is the Home Medicines Review not in home. I'm sure people will tell you about the barriers to Aboriginal people having home visits." (Clinical Director)

"And if [IPAC Pharmacist] had any concerns about medication storage or anything like that she would do a home visit. So, there was still that option of getting her to do a home visit if there were concerns about that, but I think having the service within the clinic works a bit better than a HMR. I find it much easier to sell an IPAC pharmacy referral to a patient than an HMR." (GP-J)

The IPAC pharmacists being based in the clinic saved time for GPs and patients. GPs were able to seek advice on medications and their side effects, which reduced the need for referrals to specialists in some cases. GPs could also refer patients to the IPAC pharmacists for HMRs (one pharmacist had conducted HMRs for the service prior to taking on the IPAC role, as an external provider). They were reportedly conducted in a timely manner as patients could be seen again by the GP immediately after the review.:

"I think it's definitely saved me time. It's avoided a few referrals to... specialists where I think, 'I don't know what's going on with this patient. Why are they having these symptoms?' And then [IPAC pharmacist] does a review and she's like 'Well you know this dizziness is a really common side effect of this [medication]. Why don't we try stopping this and we'll see what happens?' We do and it works. So I think it definitely is time saving from a patient perspective because they're not sitting around waiting for a public referral in the hospital system for months and months ... From previous experiences referring for HMRs that would sometimes take a couple of weeks and then it would take weeks and weeks before the pharmacist would put together their recommendations, that letter, could take a month which could be, it's still handy but it can be quite tedious. ... You got a recommendation from [IPAC Pharmacist], especially if you were in the same clinic. [IPAC Pharmacist] would say 'Thanks for that referral, I just saw this person and ... what do you think about these changes ...' So you'd have like an answer that day." (GP-J)

"Much quicker, [timelier] and then you could make the changes quickly, you can make the changes there and then because [IPAC pharmacist] would often talk to the patient about the changes. And you'd say to [IPAC Pharmacist] 'Does the patient know that were going to stop their glicazide or whatever?' And she said 'yeah, I talked to them about it' and I'd say 'I'll just do it now'. So much, much more efficient. Otherwise with a HMR you'd have to get them back to talk about. I'd often [talk] to the patient after [IPAC pharmacist] anyway but with an HMR they'd have to specifically make an appointment to come back to talk about those changes before you could make those changes which isn't always easy." (GP-J)

The reports provided by the IPAC pharmacists were also better suited for the busy GPs in the clinics:

"Also the reports that you get back are much easier to read ... You get a HMR report back from a community pharmacist and it'll be six pages long and you just think 'I don't care just tell me the main

summary of the key points here'. I don't have time to read six pages of this when there's two points at the end. Whereas the IPAC pharmacists they were much more succinct, much more efficient at sort of getting their point across and making changes." (GP-J)

Most recommended changes to prescribing from the HMRs were adopted by GPs:

"A hundred percent. Oh no I think there's maybe two that I didn't have any recommendations. So, I guess it's ninety-nine percent." (IPAC pharmacist B)

"Let's say ... maybe 75 percent of the time and often it's, was things like you know consider tapering of their PPI. Consider increasing their statins, doing a creatinine clearance and sort of having an alert that this person is sort of on the brink of having to reconsider whether they can be on this medication or not. So picking those things up." (GP-ET)

While some GPs took on all recommendations *"there wasn't a single patient that she saw that she didn't make a worthwhile suggestion or comment."* (GP-J), one GP did not take up any of IPAC pharmacist B's recommendations. However, she noted that this may have been due to his clinical experience:

"He's a very good GP. So it's not bad. It's not bad prescribing or you know wanting to ignore my recommendations. ... And ... it's not any definite thing that I recommend. It's just 'hey would you consider this' and he considers it and then just it's 'no thanks, I'll just carry on with what I'm doing'. He's always very polite. Thanks for your suggestions. So it's not anything ... doesn't want to listen, he does consider it. ... he's like no thanks." (IPAC pharmacist B)

Recommendations were formally reported through the CIS (Communicare) and flagged for the GPs to follow-up. However, often recommendations for changes to medications were discussed in collaboration with the GPs:

"I think every recommendation [IPAC pharmacist B] made was appropriate. There was only ever once where she said this should we increase this statin, and I was like 'oh no I just started it' and she was like 'oh yes you did'. ... that was done together collaboratively. But [IPAC pharmacist]'s recommendations, I can't fault. She's always gives a different aspect to patient treatment and their medication use and they're compliance. So I always found huge amounts of benefit with [IPAC pharmacist]'s recommendations." (GP-J)

Understanding that prescribing may be due to different providers:

"And you know we often in Aboriginal health services often patients don't often see the same doctor. So, they go from seeing one doctor to another to another and then their medications just tend to accumulate, and they don't have one doctor that sort of sits there and manages and says 'You know now you're on eight medications'. It's just oh you've come in with your reflux today we'll start this medication. Whereas I think in mainstream patients tend to have, this is generalizing, but they're more likely to have a single GP who sort of has a good overview and manages it whereas in Aboriginal health organizations they'll see a different person and often you don't want to change what someone else started. So often patients just accumulate medications until a pharmacist comes along and says 'Why are they still on this?' You say 'I don't know I've just been prescribing it because they've been on it for four years. And then you talk to the patient and they haven't had any reflux symptoms for that long. So I think for all of those reasons, it would be beneficial to have someone regularly in that role." (GP-J)

HMRs were also seen as an income stream for the service that could enable the IPAC role to be financially viable without project funding:

"I think just being integrated into the team's worked really well and just making the medication reviews part of, ... chronic disease management. The number of claims for 900s [item 900] has gone up dramatically. So another financial benefit to the health service and I think overall although we didn't meet any of the [project] targets and [there] probably wasn't as many referrals as I expected but I think overall ... we still had a good number of clients through." (IPAC pharmacist A)

"It does help that the health service can bill for our work. ... I know it's not the be all and end all but until pharmacists have Medicare billable numbers it's the only one we got. And I think that that's just a nice extra thing for the health service to be able to do." (IPAC pharmacist A)

Increasing patient understanding of medications

GPs, pharmacists and patients noted that patients' understanding of their medications had improved due to working with the IPAC Pharmacist. Patients often commented that no one had explained their medications to them before and now they had better understanding:

"...most people's comment, without a shadow of a doubt, is something along the lines of 'thank you so much for explaining that all to me. No one's ever told me what each of those tablets do'. That's what you just hear nine times out of ten and again, heart happy, when you hear that stuff. Everyone's right to know what the medications are for." (IPAC pharmacist A)

"So, I think the most useful thing is actually the client contact. ... when they sit down with people and talk about their medicines because I think the people we see actually have been really underserved in that sense because often they haven't had much involvement with community pharmacists. So, some of them may have lived much of their life in a remote community where there are no pharmacists, or the medications get sent out and given out by nurses or doctors or whatever. Or they might be sent out as packs and just given out, so they don't actually have direct contact with a community pharmacist. Some of the ones who have always been in town, the same thing might have happened with [health service], where their medications got sent here or was given out by us. So, they haven't had that input from a pharmacist. But the other thing is we've got a very disadvantaged population, most of whom who don't have access to the Internet or they may not have very good literacy so they don't often have the same access to information about their medications [that they] have been given for years have been given all these different medications without anybody really spending the time to explain what they are. And in fact, the GPs and nurses often can't explain because ... we often don't know which tablet is which and we get confused when ... different brand names get switched so it can be confusing to us which tablet is which. And so that's why it's just extremely valuable. I think that people actually get someone to sit down, go through their concerns, actually can say you know what each one's for, what the interactions might be what side effects might be." (GP-EF)

Education emphasised why people were taking their medications. Patients were able to feed back their own concerns about medications:

"I've found a lot of the clients that we've visited... they know the basics about why they take their medications whether it's for diabetes or a chronic illness or whatever. But breaking it down especially when you get the Webster Pak and you've got could be anything up to 20 odd tablets in there, but actually breaking it down and informing the client and educating that client about what that specific tablet is for and how it's actually helping them with the chronic illness and things like that. I mean every client I've got to say they were informed of the medications that they were taking and actually educated as to why they take them. Because a lot of it I found in the nine years that I've worked here and I've done several roles, I used to work with the chronic disease team as a support worker. I've found a lot of those clients didn't necessarily know what they were taking their tablets for, it was only because a doctor had actually said well here look these are your tablets, you just take those at these specific times set out on your Webster Pak and you know, all good. We'll see you in three-months sort of thing. But with this with this program here, ...their medications are being reviewed right there and

then because the client is giving the pharmacist feedback right there and then as to whether that tablet is helping them, that [for example] that tablet makes me feel sick. So the pharmacist is able to look at it, document that, write it down and without the actual client having to come back into the clinic necessarily those medications can be reviewed with the pharmacist and the GP.” (Outreach Worker)

One IPAC pharmacist had had a patient call up during observation concerned that her medication had been changed since being discharged from the hospital (see boxed case study).

Case study: Understanding of Medications

I reckon compliance has picked up and you know people's understanding has really picked up. And you know when people question stuff, that's when I really know that they understood. Like even our lady today, I guess she's just in my mind because she rang and we went to see her, but how's that [her] noticing what changed from morning to night time. [I'm] impressed She's wouldn't have any education per sae. She's not someone that you would expect ... to be quite that on the ball with her tablets. So I mean beautiful things like that where people really surprise you or people who you know they were falling in real pickle with their diabetes and maybe you do see a good change with it in their HbA1cs. ...often they get worse but you know when you've got someone and then they understand their tablets and you realize that it is increasing compliance. Amazing.

[She is] a complex patient, multiple comorbidities. You know in and out of hospital, in and out of the health service. She's actually just gone on to dialysis in the last couple of weeks. And so all her medicines have essentially changed because now she's on dialysis and even when she picks up her medicines from now, [they] will change, it won't be from the pharmacy here at [Clinic C], it will be at the renal unit and she was really worried that there was too many in the morning now. And I tried to reassure over the phone that that is probably very fine and safe and has just been from a different doctor and you need some change now that you are on dialysis. Please take your medicines as they packed. She requested a home visit which I'm happy to do and had capacity to do just today. So I went out in the afternoon. Before that got a list of all of new medicines from the renal team. So actually now I've got what her new regime for her renal stuff is so I could check it and so I could explain it all to her. And she's spot on. Like most of the things have changed to the morning. Most of that is safe and fine. But you know on review actually she has noticed a couple of really good things like particularly the pregabalin that she normally had one capsule at night, is now two capsules in the morning. That's a sedating medication that is normally given at night-time. I can't see any reason for that to be changed to the morning necessarily so possibly that is an error. So I just emailed the renal team at [hospital] just to ask about that. I thought possibly that was a packing error from the pharmacy, but it's not because it clearly says on the renal sheet 'morning'. That looks like a junior doctor who's prescribed that one, so I'll just ask those sorts of things ... So actually, to that lovely patient's credit, she has picked up without knowing specifics, she's been proactive enough to come and ask those questions and that just makes me really happy because people are taking real power over their medications now. (IPAC pharmacist A)

Another patient that [IPAC Pharmacist A] mentioned today, that actually rang her directly and said can you come, lots of issues, actually incredibly complex and she's bouncing in and out of hospital and she's got heart failure and end stage renal disease and in the last admission to hospital they've started her on dialysis. So she rang [IPAC pharmacist] today and said 'Can you come to my house and sort out my medicine?' I was on twice daily dosing and now all my medicines are in the morning and [IPAC pharmacist] was like actually I've got people booked but I will try come this afternoon. But that sort of direct building rapport and relationships with their patients which is so, just invaluable. And so if that patient had those questions and the [IPAC] role wasn't there, who would be here to help? Well she'd probably come to see the GP and then I would have that because we haven't received a discharge summary from her yet from her recent stay. You know I would be trying to scramble to work everything out. And so it's that's just I think along with my patients that have become more up with their medication regimens that sort of direct sort of relationship.” (GP-E)

Some referrals from GPs or health professionals were to discuss and explain medications as well as assist people with their inhaler techniques. Patients had received a HMR but wanted more information about their medications:

"I think for lots of people they've already been told a lot of the stuff anyway because I have had people come back who've had a medication review. But then are saying to the GP or the AHW that they don't understand. You know I've had a couple of re referrals saying they don't understand their medication. So I think that their education is important and a lot on kind of inhaler techniques that then they just keep representing and they're still not kind of using it properly." (IPAC pharmacist B)

Medication list


A way of enabling patients to be empowered was to improve their understanding of their own medications. One of the key tools that the pharmacist developed was a printed medications list (see Figure 17). This tool was adapted for individual patients and consisted of pictures of medications, the dosage, what time of the day to take the medication and the reason for the medication. Patient feedback has been very positive.

"I don't read and write real flash and I couldn't pronounce a lot of the words on my tablets. I had no hope. It was Chinese to me. Having that sheet helps me with that. I mean I'm not practicing the bloody words but at least I can recognise them." (Patient)















"I think it's a brilliant idea What she does, and she does it individually for every client based on their medications, there's a diagram a picture of the actual tablet itself and then it's broken down to how many times a day they've got that in their Webster Pak, how many times I have to take it throughout the day and actually the number of the tablets that should be in the Webster Pak and things like that. And what she's done instead of instead of having what we call 'doctor jargon', you know, we don't, not even me and I'd like to think that I'm a little bit educated so to speak, but I don't understand the terminology. So what [IPAC pharmacist] has done is broken it down into just plain English so people can look at it and they're given copies of that and they can look at that and they can read it themselves and they can understand that 'oh okay yes that little blue tablet that helps me out with whatever' whether it's a blood thinner, blood pressure. Yeah. Depending on I suppose your chronic illness and what you require. But she's broken it down and she does that individually for every client that we go and visit." (Outreach Worker)

Figure 17. Example of patient medication sheet.

Medication List

 Allergies :
No known medicine allergies

The information below will help you use the medication your doctor has prescribed safely and effectively

Medication	Dosage	Take at				Reason for medication
		B'fast  BREAKFAST	Lunch  LUNCH	Dinner  DINNER	Bed  BEDTIME	
 Frusemide	20mg	1				Helps remove fluid
 Spironolactone	25mg	2				Helps remove fluid
 Pantoprazole	40mg	1				Lowers stomach acid / helps stop reflux
 Magnesium aspartate	500mg	2		2		Magnesium tablet.
 Sulfamethoxazole / Trimethoprim	800/ 160mg	1				To help stop bacterial peritonitis (infection)
 Thiamine	100mg	1				Vitamin B1 tablet
 Salbutamol puffer	100mcg/dose	Inhale 2 puffs as needed via spacer				Shortwind. Lungs – reliever
 Seretide puffer	250/50 mcg	1			1	Lungs – preventer. Use everyday and rinse mouth after use.
 Tiotropium (Spiriva) puffer	18mcg	1				Lungs – preventer. Use everyday.
 Lactulose liquid	Liquid	20mL			20mL	To help stop confusion. Use everyday.

If you have any questions about your medications or how to take them please contact your local Danila Dilba clinic or speak to your community pharmacist.

The tool enabled patients to have something tangible, that they could carry and refer to:

"I think you know [IPAC pharmacist A] and I think [IPAC pharmacist B] is the same but they certainly didn't let anyone leave without a detailed list of their medications, and sort of jargon free list. So you know it's useless if they walk away with a thing that says they're on ramipril for their hypertension and they have no idea what that is, that you know they always left with a really good understanding all the medications [they] are on, why they were on it and why anything was stopped if it was stopped you know and what side effects to expect and things like that." (GP-J)

While this tool was valued by patients and clinicians, the hours spent developing the tool was not recorded in the logbook. Developing medication lists could take a whole afternoon.

Patient Case Study: using the Medications List: "It's my cheat sheet"

Marjorie does not read and write. In the patient focus group, she explained how she used the Medications List or her "cheat sheet".

Yeah I call it my cheat sheet.

"[IPAC Pharmacist] printed off a sheet with all the tablets on it and all the right colours that they are in the Webster Pak. And whenever I go up in that hospital. I give it to them. They can photocopy it but they got to give me back the original. And it stops me from having arguments about tablets and medication that I'm on, that they're not giving me or they should be giving me. And it just saves such a hassle. But you got to give it to the doctors when they come around and you got to make sure they put it on their little laptop computer. Otherwise it doesn't come back to you. And then you really, I think you need to have a, pharmacist to pop up and explain because they never got the same colour and the same type of tablet what we've got and explain the differences. Yeah because when I go up they want you to take things and I don't know what it is."

Interviewer: How has that been ... since you got your cheat sheet?

"It's been a 100% better than what it used to be before. Well because sometimes I'd go days without a particular medication. This time at least it's only normally 48 hours."

Even when they get you in the ambulance because I normally do carry mine [information sheet] with me all the time. I can give them that.

I don't read and write real flash and I couldn't pronounce a lot of the words on my tablets. I had no hope. It was Chinese to me. Having that sheet helps me with that. I mean I'm not practicing the bloody words but at least I can recognise them.

Patient Case Study: Enabling independence and choice: John

John lives independently in a cabin in a nursing home. He has Parkinson's disease. Within the last year he had returned to [town] after travelling across three states (NT, WA and SA). IPAC Pharmacist A traced John's medical history from the different clinics where John had been prescribed medication. She found errors from moving multiple times. She facilitated the lowering of the dose for one medication and John has found that his shaking is better.

IPAC Pharmacist A also worked with John to support him to take control of his own medication. Previously he had to and walk to the nursing centre to get his medication; five times per day. This was especially difficult during the hot and rainy wet season. John did not have a dose administration aid and was dependent on staff to administer his medication. This was a big change for John, as he was used to being independent and managing his own medications. IPAC Pharmacist A said they needed to "think outside the box." She worked with John and nursing home staff to enable John to keep his medications in his cabin. There was a case conference with his GP, the IPAC Pharmacist and nursing home staff. Both John and the staff were educated in the use dose administration boxes and tablet crushers.

IPAC Pharmacist A has re-visited John multiple times and reports that John is now happy he has his DAA box in the cabin. John felt that no one else would have been able to enable him to manage his own medications, but the IPAC Pharmacist.

(From observation)

Patient Case Study: Developing patient centred guidelines with support workers: Henry

Henry lives in supported accommodation (state/territory Government facility), he is awaiting a speech therapy appointment. Henry took several medications and found these difficult to swallow. IPAC Pharmacist A worked with Henry and his support workers to ascertain what changes could be made to his medications.

IPAC Pharmacist A helped develop a crushable version of Henry's medication list. As several different support workers cared for Henry, IPAC Pharmacist A also developed a crushing medication guide for use by the patient's support workers. The supported accommodation organisation decided to use the guidelines for in-house training for staff. IPAC Pharmacist A sat down with staff and developed "don't rush to crush" guidelines.

The researcher observed that the staff continued to contact IPAC pharmacist A about Henry's medication. One sent an email concerned that some tablets were not dissolving correctly. She contacted the worker and reassured them that the tablets were OK (dissolved reasonably).

(From observation)

Patient adherence

Due to the IPAC pharmacist roles of undertaking medical reviews, developing the medication list and patient education; the Pharmacists had had an impact on patient adherence.

"Often patients would come in and they have not taken their medication for a long time because of a side effect that we've sort of missed. And then [IPAC Pharmacist] will come along and say they're not taking them because of this, why don't you try this instead. And then you'd see, you definitely see increased compliance." (GP-J)

The pharmacist had more time to sit down and discuss medications and had different ways to communicate about medications.

"GPs do not have time to do all of this. Like how are they going to fit that into a consult? This is what's it's great having a pharmacist here because we can sit down we can actually do the tablets one by one and I prompt for that actually when I get to like I should say too I suppose in that question like 'How many days in the last week have you taken this medication'. I guess I added a lot of prompts to that like. What about the night-time ones... just to clarify." (IPAC Pharmacist A)

The GPs could give specific examples of patients who had seen the IPAC pharmacist. Patients who had previously said they were taking their medications have become adherent.

"I've got one patient, she's got hypothyroidism, her TSH [thyroid stimulating hormone] was always elevated. She's always said she was taking her medicines and was always elevated and then [IPAC Pharmacist A] met with her, and I'd tried to convince her to use a dose administration aid, she was very, very reluctant to do that but meeting with [IPAC pharmacist A] resulted in her using a dose administration aid storing her thyroxin in the fridge and taking it at the right time and then lo and behold her TSH is almost undetectable. So we had to reduce her dose of thyroxin and so you know that that process of convincing her to use [the DAA] you know sometimes different professions have more luck." (GP-E)

"People that have had haemoglobin A1cs in the 10 - 11 percent and have gone through this process where they're taking their medications. You know they've stated they taking their medications but actually have said to me they're taking the medications and it turns out that they never take their night-time medications seeing [IPAC Pharmacist] and some of these people we ended up ...just reworking their regimens so that they are only on morning doses and then...ending up at target, you know under 7 percent. They've been over you know 8 or 9 or 10 percent for [a long time] and just that

feeling you know I've sometimes emailed her and said you know this person has started taking all their medicines, I can't believe it." (GP-ET)

"I think another area that's really improved is people taking that preventative inhaled corticosteroids and preparations and understanding. For some reason I seem to inherit a lot of patients that think that salbutamol is the preventer and are taking their salbutamol regularly, two puffs in the morning and two puffs at night but they're taking their purple puffers, they're seretide PRN and just picking up those clangers, I think as well because, her role is to systematically go through people's medications which we might not always do when we see a patient for the first time because that's her role to meticulously go through people's medications and look at drug-drug interactions and that how they are taking them, and the puffer techniques. I think on the whole, it has so improved the health of my patients that I've referred to her and like the kind of proof is in the pudding with the numbers, the improved glycaemic control." (GP-E)

Education of other health professionals

Education for other health professionals was provided by the IPAC pharmacists three different ways: in formal education sessions; during joint consultations (usually with Outreach Workers) and "ad hoc" when GPs or health professionals had "hall way conversations" or asked them questions in their office. The pharmacists were open to answering any questions; and GPs appreciated the informality of this process and the promptness of replies:

"So there's been a lot of informal collaboration which has been incredibly valuable as well as the sort of more formalized process of the pharmacist meeting with the patient and going through everything and then often meeting with them again and then meeting with them again on some occasions and having an ongoing sort of relationship with the patient as well. So it's been a lot more than what I anticipated." (GP-E)

"Dropping into her room, plonking myself down, [asking] 'what do you think of this?'" (GP-EF)

"... GPs can pop in. ... that's happened heaps today [during observation]. Things like clinical questions, that's always fabulous. It's just to help with things; that doctor that just knocked on the door needs some help with some S8 scripts. I'm happy to help with that. Doctor's asking everything from antibiotics sort of spectrums and which antibiotics to use and resistant patterns to what laxatives to use in renal impairment. And having a face to face suits a lot of people." (IPAC pharmacist A)

"I don't know if they could have been any more supportive. They were, they're always contactable. [IPAC Pharmacist] ... she's got a mobile phone... But I call that probably on a daily basis and if she is with a client she'll answer, and she'll say I'll call you back. And if she's not with a client she'll always say talk to me it's fine. She'd always taken my call and answer my questions and if she was in the clinic on the day, she'd always have her door open and very approachable. If she wasn't with a client, [she was so] very approachable for us to be able to talk to her about questions or any comments or whatever. And also she's very good with her email she always replies. She's always very prompt." (GP-J)

The IPAC pharmacists were happy to undertake research on any questions that they could not immediately answer. They also helped the GPs obtain knowledge from reliable sources:

"Both of them are always available to kind of do quick literature reviews or look up some information and also reminding me how to look up information or where to find stuff on our system because sometimes it's all about where to find the resource." (GP-EF)

"I hated pharmacy subject, to be honest, when I was medical student. But then when they [IPAC pharmacists] come in they just open your eyes and they show me ... this website that they looked at and is like 'oh ok' it built up my interest too." (GP-S)

There was also the formalised feedback around medication and learning around best practice:

"And so I think our processes are much better and having pharmacists involved actually allows us to do that. And then they also get onto us about things ...reminding us about de-prescribing say PPIs. You know all those things that are kind of current in pharmacy best practice. They are kind of pushing that along faster than we will probably be thinking about that but I think they keep on reminding us all you know what's best practice for smoking cessation or whatever current cut sort of topics in pharmacy." (GP-EF)

"It is the advice to GPs and it's someone in their team who they trust giving them feedback about stuff. it's about GPs being able to tap into expertise and not have to seek it. And also to deal with what they don't know, they don't know." (Clinical Director)

The Pharmacists had been involved in formal education at staff meetings:

"They do quite a lot of educational stuff for the rest of the staff ... they do get quite involved in presenting to both medical and non-medical staff and in fact they come to the monthly doctor's meeting." (GP-EF)

"Everyone, all clinical staff, so Aboriginal health practitioners, RNs and the GPs and that was very valuable. And then it's actually been helpful because I don't think I'm alone amongst the GPs, that being a little tentative about the new glycaemic agents. And it's been quite good to be able to liaise with someone." (GP-E)

Relationships and Collaboration with other providers

Relationships with Community Pharmacy

The ACCHS works with four community pharmacists that are located close to each of the main clinics. A good relationship existed prior to the IPAC project due to the contracts that existed with the pharmacies in relation to arrangements for preparation and supply of DAAs.

"There's always that interaction with our pharmacies because we use specific pharmacies for dispensing and the making of our medications or Webster Pak and things like that, there's always, I suppose, conversations happening if it's between the pharmacist or our pharmacist doing the project and our pharmacists that work in the, five or six pharmacies that we actually have that actually deal with specifically [health service], I suppose medications that we get for our clients because the packs are made up at those pharmacies. We have our accounts with them, and we've worked with them for years. So, there's always those conversations between our pharmacist and their pharmacist and you know our pharmacist speaking with our GPs and GPs speaking with pharmacists in regards to medications." (Outreach Worker)

"That was what the role was before. The [health service] role was liaising and we've got contracts in place with our pharmacies as the ones that will have accounts for clients because we pay for everyone's medications. So yeah we've already had kind of a very structured process and we get them to come and do the imprest in the clinics for us too so they come and visit and check the imprest. So they were already known to myself and to a lot of the clinic staff as well." (IPAC pharmacist A)

"I'm largely talking about retail pharmacist that we have contracts with. ... when you've got pharmacists who are managing our imprest basically on a contractual basis to have someone who speaks the same language, for want of a better word to talk about 'stuff'." (Clinical Director)

Liaison with community pharmacists had increased with the introduction of the IPAC pharmacist roles, particularly around managing patients using dose administration aids. Some patients were no longer picking up their medications from the community pharmacy:

"So with that sort of thing I think also they do a really good job of liaising with the community pharmacies that do the packing. So you know making sure that they're not packing for people who are not picking up or and also putting in systems for people who aren't coming in for review because sometimes the community pharmacies want us to keep on providing scripts for people who aren't coming in ... who aren't regular clients. So I think they ... give us someone extra to advocate for us as well about you know trying to provide the best quality service so that we're not providing medications without other clinical services." (GP-EF)

"We started one little project the other day ...if a patient hasn't picked up their Webster Pak for three months from the [name] pharmacy here, they send us a list of all those patients and say 'look we're not going to pack anymore for these guys. They haven't picked up for three months. We need them to have a review'. That goes to the duty doctor and the duty doctor tries to call all those people and then also look through the notes and [see] have they moved are they now in the city or what's happened. And then if they can solve it great and if they can't they then flick them to me and I actually go out on a home visit with one of the Outreach Workers and just do a bit of a door knock and can say 'Oh hey you know, you haven't picked up your meds for a while. Doctor needs to see you again. Would you like to book in? By the way this is why the medicines are important'. You know just a bit of an extra kind of safety net so that's a bit of a new thing I suppose and look none of that's officially probably IPAC stuff but that's helpful." (IPAC pharmacist A)

There was also increased communications with the community pharmacies as a result of increased HMRs:

"A little bit of extra communication because of the medication reviews so because the item 900 requires you to send the plan to the pharmacies that they're hearing from us I suppose rather than the HMR pharmacist, but that's set up" (IPAC pharmacist A)

Liaising with the Hospital

The IPAC Pharmacists had a key role liaising with the hospitals, particularly around discharge summaries. One pharmacist had introduced herself to the hospital pharmacy team and information about the IPAC role was part of the orientation for hospital pharmacists. During observation, one IPAC pharmacist noted that she had received a discharge summary from a new hospital pharmacist who must have heard about the role during orientation.

"[We] went in to the [regional hospital] and did a presentation to the pharmacists about [health service] and say about the IPAC services so we could try and work more closely and that they could let us know about any patients they were discharging that they'd identify that had medication changes that needed to be followed up" (IPAC pharmacist B)

Both IPAC pharmacists had done a lot of work in transitional care which had improved the quality and timeliness of discharge summaries. The IPAC pharmacists would contact the hospital pharmacists for patients' discharge summaries, saving the GPs a lot of time.

"[The IPAC Pharmacist] worked at [Hospital] in the past, so it's like she's got superpowers, she can get the discharge meds. I might try and liaise with the RMO. I might try and liaise with the pharmacist... trying to get to the bottom of what's happened when someone's been discharged from hospital versus what becomes a far more efficient and accurate outcome." (GP-E)

"... liaising with [Hospital], where people have recently been in hospital or even when they haven't recently been in hospital and there's confusion about their discharge medications and reconciliation of different regimens..." (GP-E)

"... you can help with that transitional care which has been really rewarding I think and time consuming and the kind of stuff that if like there's just no one else that would do that role. Like

community pharmacy doesn't have time to do that stuff and they don't have access to Communicare so they can't really see it.” (IPAC pharmacist A)

The IPAC pharmacists also followed up any confusion or changes around medications, particularly for renal patients:

“Sometimes there's confusion at discharge whether people's medications have been changed or they'll talk to the hospital pharmacy. There can be discrepancies between the discharge summary and what the hospital pharmacist thinks they've been discharged on. So they often do that work of actually trying to match those things up and chasing up the ... doctors, the more junior doctors and the pharmacy team.” (GP-EF)

“If there's discrepancies like there are a few times discharge medication said this, and in the written discharge summary ...it says this one is 40mg but here it says 20mg. [The IPAC pharmacist] will sort it out” (GP-S).

The pharmacists also received referrals directly from the hospital pharmacists for patients who had recently been discharged from hospital and were confused about their medications:

“... when they get discharged from the hospital and they've got their discharge summary and they get a new script ... and the doctors at the hospital, I guess, because they're so busy they don't have time to explain what the medications are for or the changes. Then they'll come make an appointment here, see our doctors and that used to take up a lot of our appointments. ... so instead of seeing a doctor they could bypass the whole thing and just make an appointment straight with [IPAC Pharmacist] who's always happy to help and explain the medications and why they've been put on it.” (Outreach Worker)

Apart from the hospital pharmacists, the IPAC pharmacists also liaised with specialists, particularly from the renal unit.

Project – Enablers

Experience and personality of the pharmacists

A key strength or enabler of the IPAC role was the individual experience and personality of both the pharmacists. Both pharmacists had extensive experience working in the state/territory and with Aboriginal peoples and in the Aboriginal Community Controlled Sector which enabled them to work effectively in the role:

“...we had people who'd had very sound experience in the [jurisdiction], sound experience in remote, had had cultural training and, and in the organisation and also worked, [IPAC pharmacist B] worked in the organisation for some time which you learn a lot on the ground. And [IPAC pharmacist A] had been working at [remote community]. So, it was about getting the right people. And so that that goes to communication style and expectations and all that sort of stuff, not just with clients but also, we have all Aboriginal clinic managers so that that was part of fitting in the team.” (Clinical Director)

The specific skill set of the pharmacists, including being HMR accredited, was also cited as a key enabler:

“... I think being HMR accredited probably is pretty important. ... but I feel like... it just means you're more comfortable with your clinical recommendations” (IPAC pharmacist A)

The pharmacists saw Indigenous Health experience, particularly working with renal health patients and patients with chronic disease as important to the role. They also had experience working in a multidisciplinary team:

"I don't think many pharmacists have worked in a multidisciplinary team as well so knowing, understanding everyone's roles and being appropriate in terms of how you communicate with other staff as well." (IPAC pharmacist A)

Another key enabler the working relationship developed between the pharmacists. Both IPAC Pharmacists felt that they had developed a good working relationship, as they worked at different clinics and had complimentary skill sets. They also valued the peer support and the opportunity to exchange ideas:

"We've got different skill sets. ... I love asking [IPAC pharmacist B] things just someone to bounce things off. It's just I feel very lucky. I kind of feel for the people in the other sites that haven't got a comrade with that, because being a sole practitioner is really hard." [IPAC pharmacist A]

The pharmacists were approachable and worked well with all staff and patients:

"Personal skills are really important. You know just being flexible, not getting perturbed if things change during the day because things do and being a good communicator is just imperative." (IPAC pharmacist A)

They also took the initiative to be their own champions of the role.

Service had experience with a Pharmacist

The ACCHS had lobbied for a long time to have a non-dispensing pharmacist role in the service. This meant that not only were GPs used to having a non-dispensing pharmacist, but that many of the pharmacy systems and protocols were already established:

"[The previous pharmacy role had] no contact with clients and the position sits in health systems, so it's very much looking at policies and procedures. It was really originally ... to get the pharmacy budget under control, so it's very much an admin [role]. But because the pharmacist was here then we were asked questions obviously about medication and ... we would look to policies and procedures for medication safety..." (IPAC pharmacist B)

"I think we already had a pharmacist so it's not like some other health services where there's been too much to change because we already had a pharmacist to advise on medication safety and we already had a big medicine's guidelines. We already had, the imprest and the medication processes sorted and we've also got really good prescribing on the whole here I find." (IPAC pharmacist A)

Pharmacy Technician Support

Furthermore, the health service had a Pharmacy Technician already on staff that was able to provide support to the IPAC team; particularly around arranging appointments and paperwork for HMRs. The Pharmacy Technician also took on some of the accounts role of the non-dispensing pharmacy role so that IPAC pharmacist B could undertake the IPAC role two days a week.

"She helps us with it, so before IPAC started her role was to help with the referrals for HMRs. So she did kind of all the background and the paperwork in forwarding the referral to the HMR pharmacist and then receiving the report and then letting the doctors know of the report. So we just modified that slightly for then our referrals so she helps us. So she gets a report of the referrals. She contacts the referred clients and finds out where they'd like to see us and books them into us because that was probably a bit that was, takes up quite a lot of time that kind of admin stuff. So ... she's been a big help there." [IPAC pharmacist A]

"another very useful thing that [Pharmacy Technician] does and this is all because it's Medicare rules and you have to. She closes that final part of the Medicare loop. So once the GP's claimed the item number 900, it says in the Medicare rules that we've also got to send a copy of the doctor's comments and changes to the community pharmacy. ... So [Pharmacy technician] sends that to the retail

pharmacy so that everything's happy with Medicare but cc's us into it too" (IPAC pharmacist A)

Stable Workforce

While not directly identified by those interviewed, another key enabler identified through observations during the site visit was the stability of the workforce, particularly the GPs. There were no locums and there was a stable GP workforce that grew to understand the role of the IPAC pharmacists and fully utilise their skills. Workforce stability may not have been identified as a strength or enabler as the team were not aware of the impact of a locum-based workforce which could have been detrimental for the IPAC role. (You don't know, what you don't know.)

Project - Challenges

Engaging ACCHS staff

Initially it was difficult for the IPAC pharmacists to facilitate referrals to them from all GPs. Clinicians sometimes forgot to refer and had to be reminded of the IPAC role and change their practice:

"that was very hard to do at the very beginning because we're not used to it yet. And it slipped my mind often ..." (GP-S)

"... one of our other doctors who's been here a long time she's actually one of the original GPs for [health service] when it first started she's been a challenge. she has a whole stream of chronic disease patients so perfect patients for us and so working with her and then trying to remind her that we're here and she has said that it's something that she has to change her practice because it's not what she normally does. So I think she's quite set in their ways and so it's just a change of practice but even she's been really supportive and done a few [referrals]." (IPAC pharmacist B)

"Probably initially in the first three months [I did not refer] and that was probably just because not because I didn't think that they had benefit, but because it just wasn't in the forefront of my mind." (GP-J)

"I think challenges was getting everyone on board. Just reminding people that we're here." (IPAC pharmacist A)

One GP commented outside of the interview *"I wish more of my colleagues used [IPAC Pharmacist];"* supporting what she reported in the interview, that the role *"probably hasn't been as utilised as it could have been"* (GP-E). She stated that it may just be the way GPs worked and whether or not they were collaborative. The IPAC pharmacists also felt that, while the GPs and Outreach Workers utilised their role, there were other health professionals that they could have engaged:

"... there would probably still be people in the clinic that don't I reckon because particularly somewhere like [Clinic C location] where it's pretty busy. I do reckon maybe the RNs and the AHPs haven't used me as much and maybe that's also me not using them because I don't always have to go and talk to them about particular things which you know I think if we haven't got shared care patients then I reckon probably the RNs and the AHPs wouldn't know exactly what it is that I'm doing still in some of the sites." (IPAC pharmacist A)

High rates of 'Did Not Attend' (DNA)

The ACCHS experienced high rates of patients not attending when an appointment had been made. However, this was common across the service: *"Hate to say but that's just part of the gig."* (IPAC pharmacist A)

Patients were also difficult to follow up, mainly due to changes to their phones and being out of credit (reliance on pre-paid phones). Text messaging worked better for some patients.

Recruiting patients: numbers were not as high as expected

Both pharmacists commented that a challenge was that they did not get as many referrals as expected. GPs sometimes did not refer as they not only forgot about the role, but also because patients sometimes had multiple health appointments and they felt that another referral would be another burden:

"And the other thing is you know these, sometimes patients see sort of multiple allied health you know they've got, they're seeing the diabetes educator and the optometrist and the podiatrist and the cardiologist and the endocrinologist and you think 'I'm just going to overload you if I if I ask you to see a pharmacist as well'. So you sort of put that for the next time we see you, I might mention that. I think definitely, unfortunately especially initially, ... our pharmacist isn't the number one priority here. That needs to go on the backburner but certainly towards the end of the recruitment process I thought the pharmacist was probably one of the most important allied health [professionals] to get patients into... just because you always I never got a referral back from [IPAC Pharmacist] that was a waste of time. You know there was always something to come out of it." (GP-J)

"Generally, I think [people are] overloaded with medical...appointments you know, in a three-month period they might see the optometrist and the podiatrist and the psychologist... Having one more appointment another appointment, it was just too much sometimes. That would probably be the most common, they were like 'nah like it's enough, I see, I already see enough people'." (GP-E)

"How much time do you need, if someone has to see five different health professionals who should they be and how much of them do you need? There's those sorts of things that I think are a challenge for us. What's the right number of times to come to a health clinic and what do you do there? Because you could spend all your life [going to appointments] couldn't you." (Clinical Director)

"A lot of, some people had too much going on already. So you already had lots of appointments, didn't want an extra thing that they had to worry about and come back and see us." (IPAC pharmacist A)

At Clinic B clinic there were only two referrals, and this was due to the previous experience of community members with other initiatives:

"At Clinic B, people just do not want to sign a form. [They are a] bit fearful of that. Not that into things where it's all formalized. You know these guys have lived through intervention, they've lived through stolen generation, you know signing a bit of paper they don't understand is not high on their list of priorities. So I think Clinic B in particular, I feel like people just didn't want to sign something but the other ones I guess, transient people, they're not regular people of the service, so can't consent. A lot of people said they'd want to have a think about it, which really is code for no." (IPAC pharmacist A)

At the observation the IPAC pharmacist listed a number of reasons why patients were not considered for recruitment. These included patients being under public guardianship, were transient, had an intellectual impairment, not a regular patient, wanting to have a thinking about it and having too many other appointments.

Short project length

The short length of the project and the lack of sustainability of the IPAC role was a challenge outlined by GPs, pharmacists and patients. Being given a year to reduce or impact on chronic disease markers was not seen as realistic.

"We just haven't had it long enough to see what the potential is from a, from particularly from a client education and an adherence point of view" (Clinical Director)

One GP commented that the project seemed to have just started and then stopped and may have been a reason for other GPs to stop referring:

"I do wonder if sort of midway through the process, it's such a short project. And there was this sense that maybe at the midpoint that there was going to start to be an evaluation process. I don't know whether that was misinterpreted as things were going to wrap up and so people might not have been aware of the duration of the project because I just went to chat to [IPAC pharmacist] directly and said can I still refer people to you. So I don't know whether people got a missed signal." (GP-E)

"It would be fantastic to have more time. We're all aware of where it sits at the moment and I think that we know the recruitment at the start of it all was really key. But I think of course is this common underestimated, the integration builds up time, so you don't start with a linear recruitment process, it's very much that early work in relationships if you're trying to change the way people do business and the way, particularly consumers approach a new service. In terms of whether you know, I really think it's hard to tell what value, consumers, people see from what they've got yet." (Clinical Director)

"I think [more referrals] would come if she if that if the role continued. I think that would come in time. My experience an AMS context is that things take time to grow and flourish but then once they occur they just take off and they have a life of their own and the big issue is when things are sort of over three to six-month timeframe you really... I don't know is there scope for continuation?" (GP-EF)

Patients and health services staff commented to the researchers during the site visit that the role was successful and needed to be made permanent:

"This shifts me you know, you get a program and it works and bugger me dead if they don't pull the plug on it." (Patient)

"If it was more of a permanent situation, permanent placings within our clinics, I could probably see that there'd be a lot more referrals for this. And I think from there I mean I know that at the beginning of this program it was very slow to get started but it grew momentum very quickly once the word was put out there through our clinicians, health workers, RNs and other specialised services, internal services that we have within our clinic and organisation." (Outreach Worker)

IT problems

Another challenge was IT problems. The CIS (Communicare) frequently went offline. The pharmacists also found the system confusing to use and reported that it was easy to lose notes in the system. As the service was so large there were also multiple servers so if one went down, IT support had to help.

Logbook and recording

Another challenge was the logbook. Lots of activities undertaken by the IPAC pharmacist could not be recorded in the logbook:

"I think the things we were doing sometimes there wasn't anywhere to record them, which I think is why people have been creative and used other headings to put them under, but then everyone's done that... So I think it's rare that it would be impossible, it would be so hard to design something to capture everything before you even know what is going to be happening so." (IPAC pharmacist A)

There were also differences in where logbook entries were made between the pharmacists. One pharmacist noted in the observation that there was no consistency with her and the other pharmacist in where they entered some data in the logbook; it was just the different ways they had interpreted the logbook, so may not be any consistency across IPAC:

"I think we saw our figures the other day myself and [IPAC pharmacist] and I were quite different in terms of how we'd been recording stuff. So I think if that's the same across the board everyone's kind of using it slightly different which [laughter]." (IPAC pharmacist B)

"Even me and [IPAC pharmacist B] have been recording things differently and we're in the same place. we only realized that when [PSA rep] came up and gave us our stats and we sat down and looked at them like 'oh gee whiz, you know, that's pretty, like I record everything I think'. ... obviously some other pharmacists would like err on the side of not recording. Whereas I must obviously err on the side of recording because my numbers are much higher and that's going to be annoying for [the project evaluation team] when you have to like crunch the data and I just feel like I'm not sure how that's going to end." [IPAC pharmacist A]

Furthermore, there was a significant amount of time taken for data entry; particularly when there were IT issues

"It slows you down and then you forget to record stuff." (IPAC pharmacist A)

Summary

The ACCHS is a large service spread across seven clinics. The two IPAC pharmacists had previously worked with the service and had extensive experience in Aboriginal Health. They were culturally safe and accepted by the community. Both pharmacists had integrated well into the primary health care team, through attending staff meetings and reminding staff of their roles as well as holding education sessions.

HMRs were a key role of the IPAC pharmacists. GPs were by being able to refer internally and reports from the IPAC pharmacists were brief and succinct. The GPs also perceived that HMRs were conducted more quickly. GPs and the IPAC pharmacists reported that patients' understanding of their medications had improved due to working with the IPAC Pharmacist. Patients often commented that no one had explained their medications and now they had better understanding. GPs also reported their time was saved with the IPAC pharmacist being able to answer quick questions and research other issues. One GP reported it saved referrals to specialists.

One of the IPAC pharmacists had developed a medications list that was tailored for each individual patient. Patients reported using this '*cheat sheet*' regularly and some carried it on them and were able to present it to other health workers at the hospital or if picked up by the ambulance, which made communication about their medications easy.

The IPAC pharmacists and GPs reported improved relationships with community pharmacists and the hospitals, particularly around discharge summaries. There was also a pharmacy technician that supported the pharmacists and assist in making appointments with patients for HMRs and making sure that all paperwork was completed.

One GP stated: "I think pharmacists are an essential part of the primary health care team and I think having them actually embedded in the AMS just means that the service is sort of individualized to the client." The ACCHS staff were very supportive of the project and supported the continuation of the role.

3.5.3 Case Study 3: Urban Health Service

"Yes we would we would like to share her. It's just that we don't want to share!" (Manager)

Background of service

This ACCHS is located in an urban centre with the population estimated to be approximately 140,000. Approximately 4% of the population identify as being of Aboriginal and / or Torres Strait Islander origin. Major industries include mining, tourism and agriculture. The town is classified as a RA2 according to the Australian Statistical Geography Standard-Remoteness Area (ASGS-RA)[67], and a 2 on the Modified Monash Model (MMM)[68].

The health service provides services at five centres throughout three local government areas. Clinic staff include several GPs, a GP Registrar, Aboriginal Health Workers, registered and enrolled nurses, and allied health services.

During the IPAC project the primary clinic was relocated from a suburb in the eastern part of town to a new building approximately 2.5km away in the city centre. The two-storey building in the central business district offered the opportunity to install a customised fit-out and now offers a range of clinical services and allied health services, all co-located in the same building. The move was undertaken in May 2019.

Profile of pharmacist

The IPAC pharmacist at this site was first exposed to pharmacy as a child through stocking shelves in her father's pharmacy. She is very experienced and had spent many years working in retail and community pharmacy in both Australia and overseas. She also holds qualifications as a teacher. She completed a brief stint in hospital pharmacy and then went back to retail in 2008 and gained her HMR accreditation. Since then she has been 'easing her way' out of community pharmacy and into consulting, staff training, HMRs, helping with setting up patient plans and setting up, protocols for DAAs.

Prior to taking on the IPAC role, the pharmacist had previous experience with the health service including providing staff training, helping set up DAA protocols and conducting HMRs. The IPAC Pharmacist worked three and a half days a week at the main clinic, and one smaller outreach clinic in a neighbouring town. The majority of time was spent in the main clinic and she only went *"to [neighbouring town] when I have a full day booked. Probably a day a month"* (IPAC pharmacist).

Integration into the team

All staff participating in the focus group discussion agreed that the IPAC pharmacist was part of the team. One Manager stated *"she's always approachable. She's always got an open door policy and she's open to any communication methods whether it be BP [Best Practice] message, hey [IPAC pharmacist] have you got a second, in the tea room, on the phone, whatever it might be"*. A nurse said *"She definitely is like part of the furniture"*. Another nurse commented that the pharmacist had developed good working relationships with staff *"Yeah really good. As I say she's not intrusive. We know that she's here"* (Nurse F).

Events and meetings

Various staff from the service reported that the IPAC pharmacist regularly participated in events and meetings: *"she comes to our staff meetings if she's here and she's always involved ... We do weekly in-services with [IPAC pharmacist] and we go through different medications, different conditions... why you would be on that medication... it's been really interesting get that sort of information about different medications and things during those times"* (Nurse F)

A Manager noted the pharmacist faced challenges participating in existing support groups: *"because they were off site [initially] ... and [IPAC pharmacist] was only part time with us"*. However, the pharmacist reported there was opportunity to participate in some health promotion activities:

"There's things that were held at [old clinic]. They regularly had things in the back car park ... NAIDOC week ... any reason to have a BBQ. Things to do with the ideas van when it was there ... they'd sort of try and do things and then have a barbecue and a football kicking competition for Tackling Indigenous Smoking... it was always a good time to go and chase down patients that you hadn't seen for a while you know. They turn up for that" (IPAC pharmacist).

Champions

The IPAC pharmacist felt she was her own champion within the health service and was proactive in attending meetings and introducing herself to staff and patients: *"I guess that was about that advocacy again. So when we had new doctors starting, if I saw people were in the waiting room, I would try to catch the doctor before I went in and just go 'if you need to use me I'm here. What I can tell you is I've been to this person's place quite a few times and we have an issue with.'"* (IPAC pharmacist)

A nurse also stated that the pharmacist was proactive and introduced herself to staff: *"Well she did [introduce herself] and I think did we have a meeting originally ... we had a staff meeting, one of our regular sort of clinical meetings and it was mentioned there. But [IPAC pharmacist] really made sure that we were aware of it".*

Support from the Health Service

The pharmacist reported her services were promoted on the health services Facebook page: *"They have a Facebook page. I think there were some things put up on there"*. A manager also reported that the role was promoted in the services newsletter: *"Yes we had it in the newsletter ... I know it's definitely been in the newsletter"*.

The pharmacist stated the posters provided by the project team were also used to help promote the project: *"there were big posters everywhere"*.

There was lots of support from all staff and the pharmacist *"was introduced to lots of patients"* by *"just about everybody ... right from the reception staff through"*. She stated that she *"already knew quite a lot [of patients] but I was regularly introduced and you know my role explained to patients"*.

Space/clinical room

Whilst the move to the new building enabled other teams to be co-located within the clinic, it was reported that there had been some challenges with IT and consulting space. One manager noted, *"Before we moved from [old clinic], she had her own consult room out the front, and since we have been here, we've sort of had a few teething issues with our IT and whatnot and have moved [IPAC pharmacist] around, but it's always been within that GP consult area. So and she makes sure everyone knows where she is"*.

The nurse stated that rooms were sometimes an issue and the pharmacist got *"just what's free on the day... some days I think if we have a few doctors it's difficult because we have a chronic disease nurse as well, so they have an office. So it's a bit hard for her I think with the room situation some days but 9 times out of 10 she gets a room"*.

The pharmacist agreed saying that at the previous location *"there was a little path to my door, knocking from lots of different staff members, lots of the time"*. However, since the move she stated *"here it's quite different"*.

Uniform

The pharmacist did not wear the health service uniform: *"Actually I've got to admit, I've never had a uniform but that's been my choice from early on and then it wasn't offered, but that's because I had said no early in the piece. But halfway through this project, I probably would now [say yes I will have one], if it was offered"* (IPAC pharmacist).

Understanding of role and support from staff

Staff had a good understanding of the IPAC pharmacists' role and the project with one GP describing it *"to have an in-house pharmacist and see how that intervention improves management for patients with chronic disease like diabetes"*. Another GP stated that *"all patients can utilise the services of the pharmacist if they want to know about the side effects of the medications prescribed by us or any other concerns they have with their medication ... with the chronic diseases ... some patients [are] not very compliant with their medications so the pharmacist is a great help to us"* (GP).

From a management perspective participating in the project was *"about seeing whether it's sustainable to be able to have a pharmacist that's going to add value to our service, and what the outcomes are with the patients, to see if this is something that we could add in if it was possible or if funding's available"* (Manager).

The pharmacist agreed that staff had a good understanding of the role and *"on the whole most of them used me very well."* However, the move to the new location posed some challenges: *"I find though that they're less inclined to use me here because of the geographical isolation. You know we're so far apart where there's nowhere near the interaction that there was at M Street [old clinic] between all the staff and the customers"* (IPAC pharmacist).

The pharmacist felt she had been able to fully utilize her skills and expertise and had *"met the doctors' requirements"*.

Key roles

The pharmacist stated the most beneficial component of the role was *"patient care. Straight out, many patients have benefited a lot. And many don't want to be benefited. But I still keep trying"*. The pharmacist was *"just making patient [educated] and ... things easy for patients. These patients get completely overwhelmed by the health system and have very little health literacy and no ability to navigate their way through multiple referrals and so I see my job more than anything, as pulling things together. I'd say my role 50 percent of the time has been about being a pharmacist and 50 percent of the time as being a patient advocate"*.

The pharmacist was involved in *"lots of team based collaboration, lots and lots"* and case conferences with other staff within the clinic.

"I would do what I call team based collaboration 20 times a day, where I would grab [the AHW] and me and ... rush into [the GPs] office because there's a patient there who we think we can make things better for" (IPAC pharmacist).

The GPs **valued the pharmacists input** and often invited her into consultations with patients where a **'three-way interaction'** could take place:

"Basically you know I go through the records before seeing the patient and if I have seen non-compliance or interactions or concerns or uncontrolled condition chronic disease then I might bring in [IPAC pharmacist] and say you know, what can we use in this situation?" Even with the patient so it makes a big difference bringing in [IPAC pharmacist] into the consultation." (GP-A)

Two other GPs concurred and described this process as being *"excellent"*.

Patient advocacy was also a core role that the pharmacist believed was *"not quite captured in there [the 10 core roles]"*. However, the PSA support staff suggested that some of these activities could be included as activity under the transitional care role:

"There were quite a few things that I was doing in the beginning that [PSA Coordinator] suggested was more like transitional care and that I should start recording a lot more in transitional care. So these were people that had come to my attention, had got out of gaol for example and had just simply dropped off the face of the earth and I went hunting for them. You know then found out that they needed some help to get back into the health system as much as getting back into their life" (IPAC pharmacist).

The pharmacist felt she had met the clinic manager's requirements.

Patient Recruitment and Consent

The IPAC pharmacist felt *"A hundred and ten percent"* comfortable approaching patients in the waiting room. At the initial site which *"was a smaller clinic. I wandered about a lot more. I knew who was in the waiting room all the time. I was able to check out who was there, say hello everybody sit down with them in the waiting room... I mean some of them beat you down with a big stick and call you some names but you know you've got to get a bit tougher than that"* (IPAC pharmacist).

As mentioned above staff also introduced the pharmacist to patients. An AHW reported: *"It was mostly the doctors referring people actually".* The pharmacist concurred saying *"quite often a doctor would stick their head out and say [IPAC pharmacist], come in here. I think this patient is going to be perfect for you. Brilliant. I'll catch you afterwards"* (IPAC pharmacist).

A couple of the nurses referred patients to the pharmacist particularly if they presented and had high HbA1c readings for example: *"if we did HbA1cs and things like that and they were high, we'd always go to [IPAC pharmacist] and say 'do you want to see this patient?' ... and she would"* (Nurse). Another nurse stated:

"We would notify [IPAC pharmacist] of patients with chronic disease and with HbA1c levels and also even if the HbA1cs weren't too bad but urinary ACR, just anything that that that might indicate that yes she would be of use to them. We would then give her a heads up and say 'well we've got this patient would you be willing to see them or would they fit your criteria?'. Well we'd book into her column. She had her own bookings column but if she was here I'll just ring her because she's really receptive and she'd like to try and get people while they're here because it's quite hard and you can book them but they DNA [do not attend] ... for all of us. It's just the nature of our clinic we get a lot of DNAs, so [IPAC pharmacist] was always very keen to get them pretty much immediately. And if she couldn't see them then and there she would come out and talk to them personally to, I guess, encourage them to come in for the appointment in the future." (Nurse)

This was supported by other staff. A manager stated there were challenges as *"a lot of things happen here opportunistically and ... over the past year with our HMRs, you know it's all good to do a referral and then [IPAC pharmacist] might spend days trying to contact the person."* (Manager)

Another clinical staff member said *"There's a lot of Indigenous people don't like to see a lot of people that they don't know. So I think that first initial when you mentioned it to them they're a bit standoffish, but if you support them with that and they do see [IPAC pharmacist], they grow onto her."* (Nurse)

The pharmacist *"did the PR"* and an AHW completed the consent paperwork at the health service and the pharmacist reported this process *"worked really well"*. Only two patients didn't provide consent after meeting with the AHW and receiving the information brief:

"One consented and signed up and everything and then two days later rang back and said no. A very, very non-compliant young type 1 diabetic. And the other one had said yes to me but he is a patient, a schizophrenic bipolar patient who then had reservations about all sorts of things and said no when he'd had the whole 20 minutes of the reading the three pages to think about it. He said no, that was fine" (IPAC pharmacist).

Some patients were not interested in seeing the pharmacist at all, or receiving any service: *"the GPs said 'Do you want to see the pharmacist?' but they've said 'no I don't want to' or they've said 'yes' but not come to appointments... we have a lot of people that don't turn up not just her. Definitely it's across the board. That's just the culture I think"* (Nurse).

No local issues were identified that might have impacted upon recruitment.

Relationships with Patients and the Community

Cultural competence

The pharmacist had much experience working with Aboriginal and Torres Strait Islander people through her prior work at *'other remote towns with high Aboriginal populations'* (IPAC pharmacist). She felt very comfortable approaching patients.

Through observations during the site visit it was evident the pharmacist had developed meaningful and respectful relationships with patients. Other staff members at the health service had observed the great working relationships the pharmacist had developed with patients. Staff had also received comments from patients in relation to their interactions with the pharmacist:

"She was so very opportunistic as well so she will reach out to patients, even in the waiting room. I've seen her sit down and just sort of have a little introduction and then try and coax them back to her room and she has a really good chat with them. They quite often come back to us as the nurses and will mention that they've had a good conversation with her. They understand a lot more now and they know what they're coming in for with their different tests they come to the treatment room for" (Nurse).

"the patients are really happy to see her. Some patients even ask to see her again. I think she's getting good rapport with the patient and medical education yet she is very happy to bring any patient with not complying with the medication or not following the instructions of the diabetes and is very uncontrolled. She just goes and get them from home and brings her back here" (GP).

"I have had that feedback from patients ... lots of feedback just saying her knowledge is amazing and the time that she's willing to spend ... really good. She's very informal the way that she gives education, so again it's a nice relaxed atmosphere with her. She doesn't act like a health professional at all. She's just got a really good manner about it. I think it really suits our clientele well" (Nurse).

"We've also received formal feedback from a couple of patients as well in regards to them in the form of a letter. It was about a patient with diabetes that had pretty much given up on that and controlling that and it wasn't until engaging with [IPAC pharmacist] that she then decided she was going to take control of it and that was her thing and that you she needed to be on top of it. She was really appreciative of that" (Manager).

"I've been with her when I first started at [health service]. I went with her to do Home medication reviews. She's doesn't just see patients inside the clinic but she will visit them at their houses where they're more comfortable and she's able to find out more information there than someone in the clinic ordinarily would be able to" (AHW).

Patients participating in the focus group discussed interactions with pharmacist being *"really good"* and *"great"* indicating positive respectful relationships with the IPAC pharmacist. The patients also reported *"definitely"* referring other people to see the pharmacist *"all the time"*. One patient felt that the pharmacist really cared about them:

"And even if we make a doctor's appointment just to see our doctor, she will still come over and talk to us and check up on us. Even though we're not there to see her, she still comes over and checks up on us which is fantastic. Shows that she actually cares." (patient).

A carer also commented:

"Well I look at those things [cultural safety] personally and you, not judge people but when you're working with people you know ... if she's saying things that make her unsafe. No she was good. She's very down to earth, relaxed, have a little joke. Have a laugh, talk about things and to the point. Our people like that to be the point you know but also to feel relaxed and my wife is really relaxed. It was good ... It's how they communicate. And that's the big thing that you got to teach is communication skills. Well [IPAC pharmacist] definitely has that. Now I'm not just saying that because she is here. I mean I don't beat around the bush. She's good." (Carer)

Another example of the patients responding positively to the IPAC pharmacist was described by a GP:

"She asked the patients to send the daily blood sugar readings to her by text. So most of the patients send the daily readings to her every day". (GP)

Patient-centred roles

The pharmacist was very effective in facilitating patients to be **empowered** and take control of their own health care. She would physically change seats with the patient allowing them to sit in front of the computer, let them read their own health record and explain anything they didn't understand. She encouraged them to be the 'leader' of their health care team:

"inviting the patient to be the team leader and putting them in my chair and inviting them to read their files. So it's about empowerment ... I'm very, very willing all the time to change seats." (IPAC pharmacist)

Through this process the pharmacist was **building the patients' health literacy**. She was also encouraging other staff members to involve patients in their care by telling them their results:

"I see them [other staff] trying to involve the patient much more. So for example there was a culture of screeners [other staff] not telling patients their blood pressure and blood sugars and things. That had to change ... So we started little on things like that and then you know more and more I invite patients when Aboriginal Health Workers are in here to read the correspondence that comes from the specialist with me. 'So come on, pull up here, now see where he says this, do you understand what that's about. Can we talk about this?' So the more I'm talking to you, the more I realize that I'm being much more of a teacher here than a pharmacist." (IPAC pharmacist)

Some patients stated that the pharmacist was a great **advocate** for them and would participate in their consultations with their medical officer. This **three-way interaction** was perceived as very valuable by the patients:

"My doctor [GP] he's fantastic. [IPAC pharmacist] and him will sit down and talk together, will come together in my appointment and we'll talk about medications and what she recommends, what the doctor recommends and then we will all come to an agreement is fantastic because they both communicate with me in the room so it's brilliant." (patient CA).

"[GP] and [IPAC pharmacist] comes in and sits down with [GP] and talks 'oh I am wondering if we can try this' and [GP] will say yes or no. [GP] will look it up and see if it is right for me to use or not and that so it's good with [IPAC pharmacist] in that. She comes in and really reacts with the doctors too." (patient MK).

The medical officers concurred that they **involved the pharmacist in their consultations**. This helped empower patients and involve them in their health care decisions.

"I did have a few patients where they came from other clinics as well as referred from some of my other colleagues due to poly pharmacy as well as pain medication as well as SSRIs. So that's where I sat with [IPAC pharmacist] for a couple of them, explained things and then let [IPAC pharmacist] take over and have that discussion with them later on ... [IPAC pharmacist] was instrumental in trying to ... replant those seeds for these patients when they kept coming back and saying it's not working and things like that. So she was pretty good on those patients and it worked well." (GP Reg).

"I go through the records before seeing the patient and if I have seen non-compliance or interactions or concerns or uncontrolled conditions, chronic disease, then I might bring in [IPAC pharmacist] and say 'you know, what can we use in this situation'. Even with the patient so it makes a big difference bringing in [IPAC pharmacist] into the consultation." (GP).

If the pharmacist couldn't see a patient immediately for a full consultation, she would briefly meet with the patient and put a plan in place to **follow-up** with them:

"And that could be a five-minute meeting that could be me [GP] calling her in to briefly discuss something and then she'll say [to the patient] come and see me after the doctor's visit and I'll give you my number" (GP).

The GP confirmed that the IPAC pharmacist had *"done that really well. She's got those communication skills."*

A nurse also commented that she was effective in following up patients:

"Yeah really good. As I say she's not intrusive. We know that she's here. She's dogged though like she won't let a patient escape if she feels that she can be of use to them she will stalk them in that waiting room and if they need to go to the GP first she'll keep an eye out and she'll say to reception make sure they come through to me before they leave the clinic. She also gives us a heads up says 'you've got so and so coming in to see you and you make sure they come in and see me afterwards'. So that's really good." (Nurse).

At the conclusion of their consultation with the IPAC pharmacist the patients would receive a copy of their contract as discussed with the IPAC pharmacist. The pharmacist reported that patients kept a copy of their contract for their reference. Some of them would put it on the fridge. The traffic light system was used to assess their test results and patients were monitoring their own progress.

"The resources we produce. They are all theirs. Yeah they take them home. I've been to places where they got them on the fridge. I do traffic lights, always traffic lights. We have traffic lights for blood pressure, we do traffic lights for HbA1c, we do traffic lights for BGL. We do traffic lights for ACR and you know patients are pretty good. You know they'll come in and they say ah I'm in the orange. I'm in the orange." (IPAC pharmacist)

Patients Knowledge and Understanding of Medications

All of the patients participating in the focus group discussion agreed that their knowledge about their medications had improved since they had seen the IPAC pharmacist. One patient said the pharmacist *"explains it more in depth than the doctors do, about the different tablets. That's what I like about her."* (patient DE).

"She asked me what medications I was on. And at the time I wasn't on anything. And she asked me if I understood what these different medications did. And I said Well no not really. And she explained to

me the benefits, what they actually do. I don't know what metformin did. All I knew was it made me sick. And you know I didn't know that I should have been started on a low dose because most people get sick on it. And then she told me well you can have metformin and you know insulin together. And I had no idea because I'd always been given metformin or insulin. Never been, you know but she explained the benefits of each one and why you know it's beneficial to have you know the medications you know because of what they do. I never knew that.” (patient TA).

“I've tried going to mainstream but I found going to mainstream things weren't explained properly to me, not like they do here at [health service]. And since I've been going to [IPAC pharmacist] well I found it really good, it's improved a lot” (patient DE).

“I know me orange and white one because I am an epileptic” (patient SI).

Another patient said that when she had questions about her medications that she would “just go to [IPAC pharmacist] ... the doctors seem to close you, shut you down when you start talking about your medication and stuff” (patient DA).

One of the medical officers concurred that patients' knowledge had improved:

“They are such meaningful interventions that she provides ... You know we try and we say ‘oh you shouldn't be on this because of X Y Z’ and think we do a really good job and they say ‘no I don't want to do it’. And then we think ‘ah whatever I tried’. Yeah but having somebody else reinforce it and someone who carries a little more weight with medication” (medical officer).

The nursing staff had seen evidence of patients' knowledge changing and consequentially their test results:

“I've had a number of patients say to me ‘you know I've spoken to so many people about my diabetes, but until speaking with [IPAC pharmacist] I didn't really understand it’. And they're coming in and really wanting to know what their BSLs are, because I always ask them, you need their consent so I always say you know ‘are you ok if I take your blood sugar levels?’ They are like ‘oh look, definitely’ ... and they'll say [IPAC pharmacist] has explained this and the other. They are keen to know what their readings are. They tell me that they have started monitoring whereas before they wouldn't. You would have people after seeing [IPAC pharmacist] come in and get glucometer machines. They've had them before but the batteries died or they've lost it or whatever so they've come in got another glucometer, and actually been interested in how it works because you can tell when you're educating someone whether they're receptive or not. And quite often you just feel like you're going through the motions they're going to take it home they're not going to use it. Whereas after a session with [IPAC pharmacist] they are keen to know how it works. They are keen to demonstrate it back to you. That's how it works. This is how I'm going to use it. ... it's been really good. There has definitely been positive feedback from patients” (Nurse).

“She's had a really good impact on our diabetic patients. First of all, she explains to them using really good analogies so they can understand what's happening in their body and just how dangerous diabetes is because a lot of them, they're fairly complacent. I don't think they really understand ... they've been for diabetic education sessions and they've spoken to us here, Aboriginal Health Workers, the doctors, the nurses, so we've all done our bit to try and to educate them, but [IPAC pharmacist] does it in a way, as I say, with analogies. So they really do understand. And I think it sort of shocks them into changing their behaviour. So she's had a really good impact there as well. And she's got people interested in actually monitoring their blood sugar levels and being interested in coming back to have the HbA1cs done and then feeling really proud if there's a change. Whereas before they weren't really interested and not motivated at all. So that's an area where she's just been really invaluable”. (Nurse)

Benefits for Patients

All of the patients reported the pharmacist having a positive impact on their experiences at the clinic and on their health.

"It's been good since I've been here with [IPAC pharmacist] because like everyone says [in the focus group], she's helped you out with your medications. My old doctor, I tell him, these tables they making me put on the weight, not helping me lose it. [IPAC pharmacist] has adjusted all my tablets around and took me off insulin now thank God. I hate stabbing myself. And she just helped out and I've lost a lot of weight since I been here in the six months". (patient MK).

"Well [IPAC pharmacists'] been really good She's just helped me a lot with my insulin and my tablets because I was on 36 a day. I was like a ticking time bomb, but she put me right there and my insulin is good. My sugar is real good. So everything is really good and thanks to [IPAC pharmacist], she helped me out a lot" (patient SI).

One GP also described the impact the IPAC pharmacist had had on a patient:

"I had a patient for her it's difficult to know whether it is Type I or Type II [diabetes mellitus]. But she was diagnosed with Type I from some other place and she was here for the last three years I think. She was here initially with ... complicated pregnancy and she was never compliant. We always checked the HbA1c and it was more than 14 and we tried to educate her. I tried to educate her for the last three years every day when she is here and she's agreed to take the medication initially but after two weeks she'd just go off insulin, and [IPAC pharmacist] tried with her a few times, and finally she organized a case conference with her family, diabetes educator from the hospital and she collected everyone and organized a case conference here and talked to her family. She has a twelve-month old kid ... so now she is convinced about whether she has to [take medications]." (GP).

The impact of patients' interactions with the IPAC pharmacist is explored further in the following patient case studies.

“It’s been life changing”

Sharona is a young Aboriginal woman in her 20s. She has been diagnosed with Diabetes Mellitus however the clinical staff including her specialist endocrinologist, have been unable to determine if it is Type I or Type II. The IPAC pharmacist and GP described Sharona as a patient who had improved the management of her diabetes. Sharona agreed.

Sharona introduced herself:

“I’m Sharona and I’ve been coming to the service for about I think two, three years now. And it’s been life changing so it’s helped me a lot.”

Sharona explained that the most useful aspect of meeting with their IPAC pharmacist was her ability to recommend and discuss appropriate medications for her with her GP and explain to her why each medication was needed.

*“Before I was on different medications that was just not working at all. And then she [IPAC pharmacist] recommended some medications and I’ve recently just started the insulin and it’s already been life changing. I’ve gone from having continuous hypers to normal sugar levels for once in my life and everything is just starting to go **back on track** for me since she’s been here, so it’s been absolutely helpful.*

“She’s basically explained everything to me. She will even show me diagrams and she will print out the information and highlight everything, circle what I need to know and any questions that I have she’ll answer them spot on, and she explains it so damn well, that I am just like ‘Oh wow I did not know this before’. And the insulin that I was first put on I was actually allergic to and I did not know that because I was injecting myself and I would get, it was burning sensations, severe bruising and like my stomach would go purple and whatnot and she’s like ‘you’re allergic to it’. I’m like ‘oh am I?’. She’s like ‘yes, we need to start you on something else.’ So she’s helped me so much with changing the medications and adjusting their units to what it needs to be. And I’ve gone from having high sugar levels from like 30 to 29 every single day, down to ten to eight ... It’s brilliant.”

Sharona reported that communication with the pharmacist was easy and the pharmacist followed up with her using texting and phone calls *“and then if there’s that issue that she books us a face to face”*.

The IPAC pharmacist would even say hello in the waiting room and check in to see how Sharona was even if she wasn’t at the health service specifically to see the pharmacist: *“And even if we make a doctor’s appointment just to see our doctor, she will still come over and talk to us and check up on us. Even though we’re not there to see her, **she still comes over and checks up on us which is fantastic. Shows that she actually cares.**”*

The IPAC pharmacist sometimes sat in with Sharona during her consultations with her GP in a **three-way interaction**. Sharona said she was involved in making decisions about her medications and the communication was clear:

*“My doctor, Dr [GP] he’s fantastic. [IPAC pharmacist] and him will sit down and talk together, will come together in my appointment and **we’ll talk about medications** and what she recommends, what the doctor recommends and then we will all come to an agreement is fantastic because they both communicate with me in the room so it’s brilliant.”*

Sharona commented that she had talked to other people in the community about coming to see the IPAC pharmacist and with your family *“yeah definitely”* all the time.

Sharona had been in hospital due to an insulin pump failure and was able to recognise that the medication supplied by the hospital was very similar to what she usually took.

"I have had to go to hospital. I think at the beginning of the year because my insulin pump failed on me for 48 hours and I went 48 hours without insulin and I got really sick and I went to the hospital. They kept me in but the medication looked basically the same as what I use".

Sharona's GP also commented on her situation and the value the IPAC pharmacist was able to provide in assisting with managing and **following-up** with the patient: *"And there was another person that we saw. We see people together often and she will get consent from myself and from the patient and we do a little sort of case conference situation where we kind of run the consult with the three of us talking. Even just yesterday afternoon we had somebody as well who diagnostically difficult when there's no real hard Type 1 or Type II even though she's been under the endocrinologist and just very difficult to manage her diabetes with insulin. She has a pump and the continuous glucose monitor and all of that sort of thing. But there's also a lot of social stuff and [IPAC pharmacist] really stays on top of this person even though she tries sometimes to disengage when things are difficult socially but if that had just been me and her, , I'd be at the mercy of when she decides she needs to come in and that would guaranteed be for a prescription."*

The IPAC pharmacist was able to make recommendations to the GP to adapt Sharona's medications to minimise challenges she faced in her social situation.

“She was so excited to see what her HbA1c was that she had left it to her birthday because she was so confident that she would be celebrating”

Taneesha is a young mother who is originally from [interstate]. She has been coming to the health service for approximately eight months. She had been diagnosed with Type II Diabetes Mellitus 16 years prior, however, until recently, had been disconnected from the health system.

The IPAC pharmacist described Taneesha as one patient who had been successful in improving the management of her diabetes. Taneesha was a patient that the pharmacist approached in the waiting room after identifying she was a patient diagnosed with diabetes and met the project criteria:

“Taneesha is probably the obvious one. Taneesha came in. She had disconnected completely with the health system. She was diabetic and had no contact to speak of with the health system at all ... I don't remember why she came in and she was sitting in the waiting room as a new patient and I sort of walked past and picked up the thing. So I sat down I just went ‘so Taneesha, hello my name is [IPAC pharmacist], I'm the clinical pharmacist here and I just notice you've put some diabetes down there. Do you to tell me anything about it?’ and she went ‘nope’, and I went ‘ok. So is that because you've had issues before’. She said ‘well they just keep putting me on tablets and I hate them and they give me other side effects and I just decided I wasn't taking them.’ I went ‘ok, fair thing, fair thing. So have you thought about the risks of not doing it?’ She said well ‘I'm fine’. ‘Yeah now but I think you've got a 9 year old and you've got a 13 year old...’ and so we just talked from there. (IPAC pharmacist).

Taneesha describes her first interaction with the IPAC pharmacist:

“Until I came here and [IPAC pharmacist] explained to me all the different medications, I had no idea that you could actually have different types of medications with each other. I was always given either one or the other. And I was, nothing was ever explained to me. And she sat me down the first day I walked in, she approached me and just explained to me all the different medications and what you can have together. I mean I've had type 2 diabetes for 16 years and I never knew that. I never knew that.”

The IPAC pharmacist explained Taneesha's condition to her including the risks and how medication would help her to minimise the risks. The pharmacist **empowered** Taneesha through improving her knowledge.

“You know my whole thing, is the first thing that I tell all the patients is ‘who's the leader of your health care team? Who's the leader of your health care team?’ And they go, ‘oh I don't know, the doctor?’ ‘Nope wrong’. ‘The specialists?’ ‘Nope wrong.’ ‘Would it be me?’ That would be the answer wouldn't it. ‘So who has to be happy with every decision? You. Not the doctor, not the specialist. Does the specialist around to your place at night and give you the tablets? No. Well then, he's pretty low down the list isn't he. So it starts with you and then there's your husband and your kids and then there's your GP and then there's all these allied health people, that's me I'm in there. And then there's your specialist and they feed information up. Not the other way.’ So I talked for about maybe an hour and a half that day. We talked about what's going to happen. You know if she doesn't do anything and this is what can happen but if she does... I do a new sheet for everyone, I refuse to use [printed] resources, I write everything for the patient just like it's our contract.” (IPAC pharmacist)

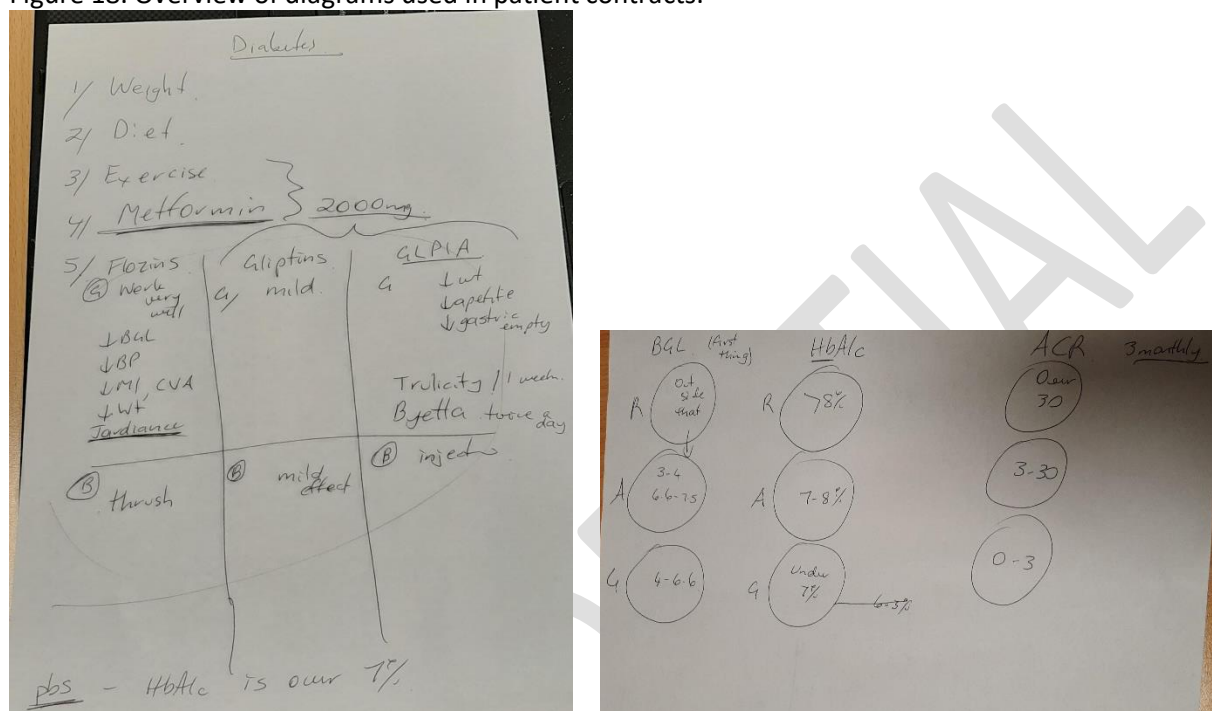
Taneesha described how the IPAC pharmacist **explained the medications** to her.

“.... She asked me what medications I was on. And at the time I wasn't on anything. And she asked me if I understood what these different medications did. And I said ‘Well no not really’. And she explained to me the benefits, what they actually do. I don't know what metformin did. All I knew was it made me sick. And you know I didn't know that I should have been started on a low dose because most people get sick on it ... then she told me well you can have metformin and you know

insulin together. And I had no idea because I'd always been given metformin or insulin ... but she explained the benefits of each one and why you know it's beneficial to have you know the medications ... because of what they do. I never knew that.

The IPAC pharmacist described this as an individualised contract. The contract outlined the descriptions of the medications and the pros and cons for each and the possible options that the patient had. See Figure 18 for an example of the framework that may be used in a patient contract.

Figure 18. Overview of diagrams used in patient contracts.



For Taneesha the pharmacist also initiated a **'patient directed dosing chart'** in consultation with her GP, so that Taneesha could be more in control of her own medication and adjust it considering side effects she may experience.

"So I go metformin, good things, on the other side bad things. Flozins - good things, bad things. Glitpins - good things, bad things. GLP-1As good things, bad things. Right now, this is what our guidelines say in this order. But we can do this or we can do that perhaps we just don't even like the idea of that one. We just chuck that one out because if you're not happy with it you're not going to take it. So it's pointless me writing you a script or getting you anything to do with it. Anyway, by the end of that time her HbA1c was ..., twelve or something and I talked her into starting a few things and we always talk about here 'patient direct dosing charts' so its patient directed. So, you're going to start on this wincey little dose and you're going to increase it, knowing the benefits are there, but you can increase it at your own rate" (IPAC pharmacist).

The IPAC pharmacist also put plans in place with Taneesha and a strategy to **follow up** with her and monitor progress. This was commonly done via text message. The pharmacist would say "'here's my phone number, you text me and you say this is what I'm doing now and I'm going to record that'. And I send them smiley faces and thumbs up and all sorts of things and every morning my phone gets ding ding ding ding." (IPAC pharmacist).

The pharmacist stated that Taneesha had been empowered and could now monitor her readings and felt comfortable discussing her health care with other health professionals.

"So the outcome of the story is Taneesha now tells all the doctors exactly how she's managing her insulin, her HbA1c is in the 5s. Absolutely always. She's lost weight. She's active, she takes part in the community now. She's a different person." (IPAC pharmacist)

The IPAC pharmacist said the key to improvement was ensuring that health care was **"patient-directed, all patient-directed. Everything I go on about is patient-directed."**

Taneesha had also become a **"peer tutor"** and encouraged other people to get their health care issues sorted. The pharmacist said that Taneesha *"tells everybody else. She's become my peer tutor you know to get things sorted."* (IPAC pharmacist).

Taneesha stood out in the mind of her GP also who commented that she was a patient who was a 'success story' and had managed to get her diabetes under control.

*"Yeah there was a really stand out patient to me recently ... [Taneesha] had **come in on her birthday to get her HbA1c tested** and I sort of spoke to her and said 'oh gosh what are you doing here on your birthday?' But she was so excited to see what her HbA1c was, that she had left it to her birthday because she was so confident that she would be celebrating. Her HbA1c had previously and I mean January this year was like 12 or something horrible and it was I think below six at this visit ... And she spent the entire time, she was just enthusing about **[the IPAC pharmacist] and how she'd empowered her with knowledge** which was the most important thing and the thing that keeps popping up with so many patients is that no one has taken the time to explain to them about their condition, what their role is, what the role of the medication is. So that they feel like they're the one in control and it's up to them to make the changes to improve things. So this woman basically came in on her birthday just to be congratulated and to feel good about it and so she should, she deserved to feel good about it. But she did give a lot of the credit to [IPAC pharmacist]."* (GP – A).

“Having that follow up I believe is wonderful personally.”

Craig is an Aboriginal gentleman in his 70s and carer for his wife Glenda who was in her 80s. Glenda is a strong Aboriginal woman who was taking multiple medications (polypharmacy) and had been diagnosed with dementia which was progressively getting worse. Craig had to take more control over the management of Glenda’s medication as she was now almost unable to do this for herself. Craig explained his situation:

“My wife is starting to get, she's losing it now, getting dementia. And so the tablets have been a worry for me. We used to get the tablets in a little strip, not a strip, in a bubble pack [blister pack]. And you'd break off each day and that was good.... But my wife wouldn't let me do the tablets, she said ‘I'm not a little girl. I know what I'm doing.’ But she would forget the day, and she'd take the morning ones on a Tuesday and take the lunch ones on a Thursday and then when I come to look, I had no idea what she had just taken. So I thought this is not good you know.” (carer).

The GP at the health service referred Glenda to the IPAC pharmacist for a Home Medicines Review. The carer reported that the IPAC pharmacist did a **great job communicating** with him and his wife and the outcome of the review and the recommendations was positive.

“then through the doctor here at [health service they] organized to have the visit and come out and go through tablets. We've actually got her off six tablets which weren't needed. And she's had no problems not having them yet, which is good. And she was getting sick of taking tablets... cause my wife she'd put them in all in her hand, just put them in her mouth and a glass of water and they're gone. When she got up went away and I look on the chair and I'd find one or two tablets, ‘now when did they come out?’

The carer reported that he understood the role of the IPAC pharmacist prior to the home visit, but he had never experienced it before.

“Yes [I understood] but I never experienced it... [IPAC pharmacist] sat down and just talked and explaining about the tablets how she's going to check into this. And when you take them in all this sort of thing do you take him with you meals and after your meals and so you know it was more personalised and Murri.. that's the only way you are going to get through, we are oral, visual people ... just having [IPAC pharmacist] to come out and sit down and talk with us as another human being to another one or another that was good and good for me but also I found it put my wife at ease. She thought well someone is really interested. And that's been really good ... So that coming to our house ... I said to my wife later I said that ‘wasn't that good?’ She said ‘that was the best.’ She said ‘well I don't need to go to the doctor anymore.’ This is perfect you know ... coming in and sitting down and talking and I found it really good too because I had better understanding because my wife would not allow me to go into the doctor with her. She said ‘I know what I'm doing’ and if I go she gets all upset. You know because she thinks I'm trying to take over. I am, but I can't tell her that. You know because she's forgetting. But to me and to my wife that was the best thing. It was good.” (Carer).

The carer reported that the IPAC pharmacist was very thorough and ensured they had a good understanding of the medications.

*“You know she went through everything and **explained everything**. And what I was trying to say before ... our culture is oral, visual and so the important stuff to have someone sit down then explain and got the tablets in front of you and what they do was a big plus because I think we didn't know what half of them did... And she sat there and she explained, she said ‘that's why I think that one, that one and that one are unnecessary ... and so you know just going through that and explaining what works with what and what you don't need and she didn't need ... I mean for her to sit down and tell us that and explain it that I could understand it, I mean I [teach at university and I'm educated] lecturer in history and speak eleven languages*

but I really don't get things sometimes. Anyway that to me, that was so important.” (Carer).

The carer felt that the IPAC pharmacist was able to support the GPs by following up with patients and helping them to understand why they were taking their medicines and promote adherence:

“I mean the doctors obviously must get frustrated. They're going through, check the patient's right, make a decision on what medication is going to help the patient and a lot of our people, goes in one ear and out the other. 'Ah it's too hard eh. I got to go down, get that tablets and do this.' And I take it for a little while and then I feel good and I don't have to do it anymore. So that's the important part. The follow up and the continuation ... little kids will have severe flu, runny nose, very bad cough straight to the doctor put him on amoxil. You know we try to stop all that as much as you can but you know and amoxil and then the mother and the doctor tells him you've got to take this till it's finished, you got to take so many pills three times a day and then you repeat and then. But you must follow it all the way through. And that little kid doesn't want to take it after three... 'ah I don't want that stuff, I hate that stuff' and so he doesn't take it so the mother gives in. So that little child doesn't take it. And then when he gets to [IPAC pharmacist] well that's not going to work anymore you know. And so this has got to be explained as well. And the doctors have that role and they do that. But out of sight out of mind. So having that follow up I believe is wonderful personally.” (Carer).

The carer reported that the IPAC pharmacist had “wonderful” communication skills and was able to work well with Aboriginal people **“[Her] bedside manners were wonderful for Aboriginal people.”** (Carer)

Patient Survey N-MARS

The patients participating in the focus group did not report any issues with understanding the questions in the patient survey.

The AHW assisting the IPAC pharmacist with the implementation of the N-MARS patient survey reported that it was a good tool to explore issues impacting on adherence: *“[IPAC pharmacist] and myself we've been using the N-MARS forms for patients and I find that form to be really useful in working out if there's any issues with the with patient's medications compliance.”* The pharmacist concurred that responses to the patient survey *“provided a basis for further conversations.”*

However, the pharmacist believed the N-MARS patient survey was not effective with the patients presenting at ACCHSs. She surmised that the patients were not honest in their answers

The Aboriginal Health Worker did implement the N-MARS patients survey, but the pharmacist commented that *“they [the AHWs surveys] were even more useless than mine ... I would often stop and stare at them and go ‘do you know what [patient]. I don't think that's actually right hey, let's think about it because you know when I went around to pick up your DAA and all those afternoon ones were still there. Why was that.’ And he goes ‘well whatever’. ... So I was absolutely able to pull things apart and go ‘you know what, we are going to start this again, let's start at the top right, let's do this.’”* (IPAC pharmacist).

The AHW also stated that patients did not always understand the questions or responses were not necessarily reliable: *“there's a question about have they taken the medications in the last seven days and that you list the medications that they've taken. Some or few people may not know the medications that they're taking and I'm not sure whether I should take their word for it or read their chart because sometimes we might not have their chart up to date properly yet.”*

Patient adherence

Health service staff inferred that patients were being more adherent to their medications and they were seeing the results in blood tests. A nurse stated:

"With HbA1cs there's been some quite significant ones where they've always run high and then come right down ... I mean there's been people being in the 14s, 14mmol, come right down to 7s, 8s. You know like there's been some really substantial ones. And then there's been ones for people who you would never expect them to have a drop at all. But we are getting drops with them as well. So no, it's been really it's really encouraging". (Nurse)

Educating staff around Medicines

The health service staff reported that the IPAC pharmacist coordinated a weekly education and training session. One nurse described these sessions:

"she's been really great cause she gives us training sessions. She does training for the staff here in her own time so it doesn't encroach on you know work time or anything like that. And those are actually fabulous, just general education. I find most of them are probably geared more towards the GPs because of the pharmaceutical side of things. So the Aboriginal Health Workers and the nurses aren't quite as interested I suppose in the drug interactions and so forth. But it's good for us to have a basic knowledge. But she goes in fairly in depth with the GPs because that's really important to them. But you know we sit in on those sessions and it's good. She's giving us some really good training in general, you know general conditions, hypertension obviously diabetes. Lots of things I can't remember off the top of my head but we've had lots of training sessions and she gives us a good general background and again uses those analogies to make it easier for us to understand so that we can then you know we're better able to explain to our patients. So her training sessions have been really, really good. I've really enjoyed those." (Nurse).

An AHW reported that *"we always have at least one doctor attending the weekly education sessions."* One GP said the sessions were *"invaluable"*. He reported the formal and informal education from the IPAC pharmacist from invaluable: *"the Wednesday sessions which is a dedicated formal education time is always useful and across the board too from the health workers or the nurses, registrars and GPs alike. But also the informal education that we get all day every day has been useful as well."*

One of the nurses supported this saying the pharmacist *"had a really good impact on the GPs."* Even one of the patients suggested that things had improved through *"the re-education that she's done with [GP]."*

Quality/ Judicious Use of Medicines

The support the pharmacist provided to the GPs was invaluable. One GP commented that the pharmacist provided recommendations informally prior to, during or after a consult and from formal HMRs:

"[The recommendations were] excellent and even with home medication reviews. So if it's before a consultation I have a quick question or during or even after, that's fine. But if I think this person's medication list is a complete mess and it's going to take a lot longer than just a corridor consult then we refer for the HMR and then there is feedback and it's great to have the pharmacist in-house you can do the feedback in person in real time." (GP).

One nurse also commented that she had seen the pharmacist provide great assistance to the GPs:

"she's helped the GPs enormously because she's so up with the medications and she checks all through each patient's medications list. She can see where things need to be tweaked then she will liaise with the doctors and quite often particularly the registrars they're like 'oh look that's fantastic I didn't know that' ... So I mean sometimes patients have been taking drugs that they really didn't need to be. So it's been really, really helpful in that regard." (Nurse).

Another nurse also said the *"majority of the doctors here are very open and happy with [IPAC pharmacists'] input."* The nurse reported that they *"work well with her and take on board"* what she recommends. It was

also reported that the pharmacist “keeps an eye on their like how much they’re prescribing [locums] and how often and she tries to work with them to decrease or take them take them off that.”

A nurse reported that *“There was one doctor a training GP, he just idolized [IPAC pharmacist] and he even rings her now I think like for advice. So he used to come to the meetings as well all the time.”*

Recommendations from medication reviews

The three GPs interviewed agreed that the pharmacist was *“making the recommendations most days she’s here and even if she’s not here she was sending us messages ... yes text message ... even if she’s not here so she is doing it all the time and it is really useful to us.”* The GPs also agreed that the pharmacists’ recommendations were *“really useful”* and *“very good.”*

The GPs reported *“almost always”* making *“changes based on her recommendations”*. One of the GPs commented:

“She has a big focus on de-prescribing which I love. That’s kind of my ethos as well. Just rationalizing and do we really need this. Where is the evidence for this? Is this actually giving you any benefit? Maybe not. Let’s try without. And a lot of it has also been about things like chemical restraint as well. So where is the evidence, where’s the appropriate diagnosis for this particular medication? If they don’t have that diagnosis is this being provided with chemical restraint is not appropriate. So that’s really important too.” (GP-A).

Another GP commented that medication reviews queried why patients were still on some medications for a long time and often there was no evidence for still taking that medication:

“Some of the medications, patients are on that medication for a long time and [I] haven’t really looked into it. Since they want the medication you used to give them, but when [IPAC pharmacist] ask ‘what is the rationale behind using that medication?’ and you look in the past and seeing everything and looking more in depth.” (GP-S).

The GPs reported that after medication reviews they *“recall them [the patients] back. If we refer for a formal HMR that will come through as a result, a letter and then we recall via that, but [IPAC pharmacist] also has her own little recall system and she might say ‘hey this person’s been back three times and you haven’t discussed the HMR’ and it might have been because there was something more pressing at the time or we just forgot, so there is that second layer of safety there.”*

Organisational/systems changes and collaboration

The health service already had policies in place regarding medication management. Having an in-house pharmacist was useful for reviewing these policies: *“as far as processes go if there was anything medication related as far as reviewing documents on our document management system I would often be like ‘hey [IPAC pharmacist] can you review this for me and let me know what you think?’”*

A manager reported that the pharmacist was also involved in reviewing the health services *“QUMAX processes as well”*. Another manager stated:

“Yeah she was probably instrumental in us changing what we do with QUMAX ... I suppose her being here now, we took that opportunity to use her knowledge to manage that [community] pharmacist so that we could make the change here and so went from Webster Pak to MPS [dose administration aid company]...”

The manager described the process of changing pharmacies which the pharmacist had assisted with:

"So we've made a complete change. We had 3 pharmacies before ... [we] went and met with the new pharmacist across the road here and from everything that we saw it was going to be more beneficial for the clients and the patients for us to be with them and streamline the one pharmacist to deal with. They were willing to do deliveries for all of our patients which hadn't happened in the past. They're across the road so if we've got any issues we can walk across the road they can cross the road. The other two pharmacies never had an issue. They just said 'Yep no worries, you're making that change' and we had informed them. The third one was the issue. But that relationship ... the new pharmacist [IPAC pharmacist] certainly has managed that very well ... and her making sure that they've got that communication happening all the time. The QUMAX funding was very late this year. So we had to manage that 'we're not getting any money situation' because we only put the paperwork in like a week ago and that's how late it was. Not because of us but because of the system. So Manager T and [IPAC pharmacist] did a good job of managing that saying 'yes you will get paid but it's just a bit slow coming' and being a new pharmacy you know it's hard to manage that when they don't know the system."

The change in QUMAX provider was perceived to be successful from the health service perspective and from the patients. The GPs commented that patients had provided positive feedback about the change: *"they like dealing with that particular pharmacy and they like the MPS versus the Webster Paks ... actually the feedback I've received is that it's so much easier to open ... and you can take a round, like if you are going for a day or two, you know you can just take them. ... I mean I think a lot of us that don't use Webster Paks think that you can just pop the medication out, but it doesn't work that way, or it does but you fire them across the room."*

One of the nurses in the focus group was managing the changeover of patients from the previous pharmacies to the MPS and reported: *"It's all been positive, like they're [the patients] really happy. They're happy with the pharmacy."*

During the observation work the community pharmacist commented that the IPAC pharmacist was a good communicator and used emails and texts effectively. Technology (mobile phone messages) was also used by the community pharmacy to advise patients that their DAAs were ready to be picked up. The pharmacy also provided a delivery service and dropped off DAAs to some patients from the health service. The driver would make three attempts to deliver the medication.

Challenges were experienced by the community pharmacist when patients go into hospital or out of town. This was an area identified where communication could be improved. The community pharmacist also stated they would be reluctant to continue working with the service if the IPAC pharmacist role ceased.

Impacts on staff

The pharmacist perceived that communication with other health staff within the service had been positive. Through the weekly education sessions, the IPAC pharmacist believed that health services staff were on a "more level playing field" and that there had been changes in medication management and discussions around medications within the team. She noted:

"Everything's been very positive. ... More than that there's been a flattening of the team structure ... so at our meetings I sit out the front and do three minutes of didactic stuff but then we do lots and lots of role plays and peer tutoring and the doctors and the health worker are exactly the same. There's no, there's no strata. And I think that then carries over into our daily jobs here." (IPAC pharmacist)

The pharmacist also mentioned changes in the roles of the Aboriginal Health Workers and communicating issues to the broader team:

"There was big changes in the way that Aboriginal Health Workers were screening, asking questions and coming to me. Aboriginal Health Workers were coming to me saying 'I figured out that such and

such is living with such and such. I think that's where the tablets might be disappearing... you know just really the sort of skills that I think that I have was starting to rub off on other people and they were coming back to me and saying 'I think I figured this out. I think I know why he does that'." (IPAC pharmacist)

The pharmacist reported observing the GPs using some of the strategies discussed in the weekly sessions in their practice:

"The doctors that would come to the sessions in the morning and there'd often be two or three doctors at our training sessions and they'd sit there and go 'oh that's an obvious way of finding out what's really happening'. And then I would catch them using my pedagogic techniques in their [consultations] because I go in there and there would be sheets of paper in there [with examples using the pharmacists' diagrams, see Figure 18]." (IPAC pharmacist)

The GPs agreed that the transfer of the pharmacists' knowledge of medications was "incredibly effective" and had improved communication within the team. One GP commented:

"I think that's improved my medication knowledge. ... I think it's improved communication with the rest of the team. I think a lot of us have been in that situation, like a lecture, where the lecturer asks the question to everyone sitting there and it's just dead silence until someone starts talking and there's a conversation then all these other people pop up and start communicating as well. I think [IPAC pharmacist] has done that for our team as well. We talk more." (GP-A).

One of the nurses had observed the GPs seeking support from the pharmacist: *"I know the doctors always seek her out to talk to them about medications. Like even this morning when she was up here, Dr [GP] was like 'oh do you know where [IPAC pharmacist] is?' I was like, 'oh I think she's upstairs'. 'Oh I need to talk to her about a patient.' So she is, it is really handy for them to have her right there just to talk about medications."* (Nurse).

Relationships and Collaboration with other Providers (including community pharmacy)

A manager from the health service stated: *"I don't know if she's been involved directly with the hospital pharmacist but I know from an organization perspective she has been seeking discharge summaries, you know when a patient has been in hospital and it's evident that there's potentially been changes, where's the summary. How do I make sure that this patient chart reflects exactly what's happened in there? So, she's been very proactive in that sense."*

A GP stated that the hospitals had issues with accessing a patients current medications and quite often would contact the IPAC pharmacist at the health service to confirm these: *"It is worse on admission actually. I have seen a couple of patients where the admitting doctor had to contact [IPAC pharmacist] to get some information for patients. But that's when you need it. It's not a standard approach."*

The GP reported that the IPAC pharmacist had participated in *"some case conferences with allied health as well"*.

The health services staff were generally not aware whether the IPAC pharmacist had had any contact with specialists in the hospital or the renal clinic. However, the IPAC pharmacist reported that she'd had contact with various stakeholders, particularly when the IT system had crashed and she was trying to obtain medicines lists for patients: *"during the data crash, it seemed to be all that I was doing. ... I don't know but I think this phone was joined to my face most of the time. I ring renal clinic so I ring, I just. And because of the loss of data I just ring and ring. I get discharge summaries from all sorts of places and just pull information together from anybody that I can."* (IPAC pharmacist).

One manager reflecting said she was *“like amazing. And also I think when we had a few data issues at the start of the year, she was like Jesus when it came to ... trying to sort out the medications, current medications and that sort of stuff and helping out the GPs in that instance.”*

One of the patients said she *“would like to see some sort of connection with the renal unit as well because those guys ... that have to go to renal and they set up for hours and hours, and then half an hour conversation with them around their medications.”* (patient DA). She thought there would be benefit in having the support of the IPAC pharmacist.

The IPAC pharmacist reported that the relationship with the local community pharmacies was *“Excellent. Except for one.”* The IPAC pharmacist stated that relationships had developed through achieving positive outcomes in a timely manner:

“I've become the first place ‘sorter-outerer’ of issues for many, many pharmacies. I get personal emails and personal texts, seven days a week from pharmacies saying ‘should we do something about this now or can it wait till Monday?’ ‘No we need to do something about this now’ and because I always make myself available 24 hours a day, 365 days a year to anyone. That means that problems can get solved when they're little and I'd much rather stop what I'm doing and take three minutes out to fix something on Sunday afternoon than have the patient end up in hospital on Monday night.”

The pharmacist felt that relationships with community pharmacy may have even improved. She commented:

“I find that the pharmacies, I don't know but I think that the pharmacies feel like ... they're being taken notice of more. And I think that the more I work with them, the more likely they are now to contact here or contact any pharmacy or any doctor's now and go ‘and I really think we need to look at this now’. So I think that's really good. You know the flattening of that structure as well.”

Project – Enablers

Getting the right person

The health service staff reported that one of the enablers to the implementation of the project was the pharmacist being the right person for the job. One manager stated:

“I think it's about the person that you get in because I think that if you've got a young pharmacist who's never been out in the community it would be very difficult for them and they would sit in their room. So I don't think you'd get the benefits from that. Whereas with [IPAC pharmacist] who has been with us for quite a while and understands that it's about getting out and talking to people that you get the most work done.” (Manager)

The GP concurred saying *“If [IPAC pharmacist] was just in her own room doing your own thing and we didn't really have much communication, I don't know that we'd get as much value from it ... I think finding someone who integrates into the team is really important.”* The other staff agreed with a manager stating: *“It's not a role where you can just sit in the room or see a patient in the home and then not interact with the other staff. It needs to be that workplace culture that you're out talking to the patients, you're being opportunistic having discussions with the GPs etc.”* The GP went on to say you need to *“get someone like [the IPAC pharmacist] who use the patient care as the most priority.”*

A GP also felt *“it's a role more suited to an experienced pharmacist ... you can't put experience in years can you, but probably not a new grad who has only worked in a city community pharmacy.”* The group suggested someone who had some experience working in Aboriginal health in a *“community setting”*.

The IPAC pharmacist felt her teaching background had enabled her to embed into the primary health care team and facilitate team cohesion: *“having a much more cohesive primary care team and having somebody*

with the skills and I think this would go for most experienced pharmacists even without my teaching background because you end up teaching and even in community pharmacy end up teaching to pull all those bits together."

Patient relationships and empowerment

As mentioned above the health services staff described effective relationships had been developed between the IPAC pharmacist and the patients. A manager also stated that patients were now feeling more empowered and were taking more control of their health:

"I think there is a component of change management in there with the patients as well and empowering them to take ownership of their own chronic diseases through that increasing education and sort of looking at what are the barriers as far as compliance goes with that individual patients. So there's a lot of casework involved as well." (Manager).

The ability of the IPAC pharmacist to use her "communication skills and the language that patients are understanding" enabled them to be more involved in decisions to participate in the project and in their health care.

Patients were understanding their conditions better and consequently were taking more control of their health. This was evident as one GP stated:

"I think [IPAC pharmacist] is open to what they can take all the time. So [with] the patients who are having an uncontrolled diabetes. She asked the patients to send that daily blood sugar readings to her by text. So most of the patients send the daily readings to her every day" (GP – S).

The pharmacist had the ability to make connections with patients quickly: *"And that could be a five-minute meeting that could be me calling her in to briefly discuss something and then she'll say come and see me after the doctor's visit and I'll give you my number and we'll, you know so it doesn't have to be very long to establish that."* (GP – A).

Effective relationships with GPs

The majority of the GPs in the service highly valued the pharmacists' role and input. GPs were seeking advice from the pharmacist informally and through formal medicines reviews. The pharmacist also participated in three way interactions within consultations and case conferencing with other staff members. The pharmacist reported:

"So the four doctors that I've really worked with, three have been absolutely 100 percent supportive and one's becoming more and more willing to involve me early." (IPAC pharmacist).

The nursing staff also identified that the GPs had effective relationships with the pharmacist: *"... It's majority of the doctors, we've only got a few, a majority of the doctors here are very open and happy with [IPAC pharmacist]'s input."* (Nurse)

The nurse also reported that one GP *"that's very old school and likes their own way, doesn't want to be told anything"* was more reluctant to use the pharmacist, but *"the doctors here work well with her ... and they take on board what they can"* (Nurse)

Communication and support from the health service staff was *"very good ... I don't think I've had any issues at all. Everything's been very positive."* (IPAC pharmacist).

Even one of the patients commented that the IPAC pharmacist had *"helped to retrain some of the doctors here"* (patient DA). Another patient agreed *"Yeah"* (patient - CA)

Project – Challenges

Change of location – space and IT

Health service staff and the IPAC pharmacist mentioned that consult rooms and IT had presented challenges, particularly since the move to the new office building. One manager stated: *“Before we moved from [old clinic], she had her own consult room out the front and since we have been here we've sort of had a few teething issues with our IT ... and have moved [IPAC pharmacist] around, but it's always been within that GP consult area. So and she makes sure everyone knows where she is”*. A nurse concurred saying: *“Well of course, it was so unfortunate because we had a computer issue like a really bad one with some temporary data loss.”*

The pharmacist also mentioned that the IT crash had impacted upon her ability to do her role and so had to redirect her tasks. An upshot of the data loss meant the pharmacist further developed relationships with external providers as data was tracked down: *“I don't know but I think this phone was joined to my face most of the time. I ring renal clinic ... And because of the loss of data I just ring and ring. I got discharge summaries from all sorts of places and just pulled information together from anybody that I could”* (IPAC pharmacist).

The pharmacist also said the more spacious layout of the new clinic meant staff had less contact with each: *“I find though that they're less inclined to use me here one because of the geographical isolate. You know we're so far apart where there's nowhere near the interaction that there was at M Street [old clinic] between all the staff and the customers”*.

Patient recruitment and follow-up is difficult. Appointment systems don't work.

A significant challenge for the pharmacist was getting patients to come and see her. The pharmacist stated is was *“Incredibly difficult. Incredibly difficult. But I don't think that that's any reflection on me and you know opportunistic conversations are the key in Aboriginal health”*.

The pharmacist went on to state: *“No Aboriginal place that I've been to... The appointment system doesn't work particularly well.”* (IPAC pharmacist).

A nurse also said that failure to attend appointments was common at the health service: *“she'd like to try and get people as I say while they're here because it's quite hard and you can book them but they DNA [do not attend] ... for all of us. It's just the nature of our clinic we get a lot of DNAs, so [IPAC pharmacist] was always very keen to get them [patients] pretty much immediately. And if she couldn't see them then and there she would come out and talk to them personally to I guess encourage them to come in for the appointment in the future”*.

As noted previously a GP stated that some patients like to *“fly under the radar and are not complying with their medications”* with a manager verifying this saying they: *“just want to come in, get their script and get out the door”*.

Patients overwhelmed

Another barrier in the project was when patients, who may have been missing inaction for some time, did present to the health service, the clinicians would take advantage of this and try and do all of their catch up appointments which sometimes took a long time *“I think the other thing is that a lot of our patients when they come in, we try and do a lot while they are here. Quite often they are here for a long appointment. So seeing a pharmacist well adds that extra 20 minutes but that's quite a long time for the patient, when you put all the appointments together.”* (Nurse)

Project and limited funding/Sustainability

Another challenge was the short term nature of the project. A nurse stated *“She has been fabulous. We'd like to have her permanently, however the health services staff were aware that the project would cease at the*

end of October. Several staff members commented to researchers during the observation that core funding was needed to continue the role. Other staff stated:

"No I don't want to think about [it]. [IPAC pharmacist] says 'oh I'm in this role until October, I think it is'. I don't want to think about that. I've just got her mobile number. I have a plan." (GP – A)

"We could have her every day ... it's fantastic to have her, even if it was one day, like that's better than not having her. So yeah whatever would fit around her. The more we could have her the better." (Nurse)

Summary

The IPAC pharmacist role was valued by the health service staff and the management. One manager stated: *"I think it's just it's become normal for us to expect her to be here whereas in the past it was whenever she could make it. So it might have only been a half day a week. You know sometimes she couldn't come and she would just do the home visit first. But I think it's very, very much now that we are dependent on her to be here and we are not looking forward to the end."* Comments from the nursing staff included:

"Well it's been wonderful, wonderful." (Nurse)

"It's really been good to have [IPAC pharmacist] in clinic to be able to access her because she's really knowledgeable. So pretty much any questions that we had to we can get an answer out of her. The program's quite Aboriginal and Torres Strait Islander based isn't it and monitoring and that sort of thing and making sure that we're improving Indigenous health." (Nurse).

"Well like I say just having that knowledge you know because it's always up to date knowledge. She's got a thirst for knowledge herself so she's forever researching stuff. She never stops learning herself. Yeah. And just the way that she is so approachable. So approachable so knowledgeable so readily available. That's it fantastic. The way that she's so willing to share her knowledge with people. That's absolutely brilliant. She's really generous with her time. Really generous with sharing her knowledge that has been so incredible." (Nurse).

A manager stated that their experience had been *"100% beneficial"* and would be willing to help other services thinking of introducing the role: *"I would definitely be open to ... providing resources that we have shared and that sort of thing. It's hard to say what exactly I would give because what works for us might be very different in another centre. But by all means if someone said to me look we're thinking of bringing on a pharmacist. I would be like yeah let's set up a meeting and we'll have a chat and you can ask me any questions."*

Another manager concluded *"Yes we would we would like to share her. It's just that we don't want to share!"*

There was overwhelming support for the IPAC pharmacist. ACCHS staff agreed that the IPAC pharmacist was well integrated into the primary health care team and approachable. The staff had a good understanding of the role and referred patients to see the pharmacist. The IPAC pharmacist participated in clinical meetings and provided education sessions to all staff.

The pharmacist answered medication queries and provided information, as well as undertaking medication reviews. Uptake of the recommendations was high and the GPs reported they were always very good. The GPs valued the pharmacist's input and often invited her into consultations with patients where a 'three-way interaction' could take place. The IPAC pharmacist developed relationships with patients and many reported that the pharmacist had changed their lives. The IPAC pharmacist empowered patients to take control of their health care by improving the knowledge and understanding of their conditions and their medications. The pharmacist would sit the patients in her seat and support them to read and understand their medical record. While low health literacy was a common issue, patients reported the pharmacist would draw diagrams and was able to explain things to them so that they understood.

The move to a new clinic location was a challenge in implementing the project as there was more competition for rooms in the new building. An IT crash also impacted upon the pharmacists' ability work in the role and hindered patient follow-up. An upshot of the data loss meant the pharmacist further developed relationships with external providers as medications data was re-acquired.

All participants valued the IPAC pharmacist role and believed there was a role for a non-dispensing pharmacists within ACCHSs.

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3.6 Enablers and Challenges

Enablers and challenges to implementation of the role and aspects of the project emerged throughout the interviews and site visits. These are summarized in this chapter.

3.6.1 Enablers

Having the right person

Having a pharmacist with the right ‘organizational fit’ and right personality was just as important as their skills and experience. As well as having clinical skills, pharmacists needed to be culturally appropriate, able to develop relationships and build rapport and to be flexible, non-judgmental and resilient.

“I think it's about the person that you get in.... [the IPAC pharmacist] who has been with us for quite a while and understands that it's about getting out and talking to people that you get the most work done... It's not a role where you can just sit in the room or see a patient in the home and then not interact with the other staff. It needs to be that workplace culture that you're out talking to the patients, you're being opportunistic having discussions with the GPs etc” (Manager) I think she's done really well to make herself... resilient (Medical Director).

“I think the main thing that we've really become ... is the conduit between pharmacies, community pharmacies, between hospitals, between doctors, between clients” (Pharm17).

“This discussion could be a very different discussion if it was a different pharmacist. So the success for [name of health service] of this project is at least in part if not marginally about [IPAC Pharmacist] and her personality and professionalism” (Director of Health Services).

“...we had people who'd had very sound experience in the [state], sound experience in remote, had had cultural training and, and in the organisation and also worked, [IPAC pharmacist B] worked in the organisation for some time which you learn a lot on the ground. And [IPAC pharmacist A] had been working at [remote community]. So, it was about getting the right people. And so that that goes to communication style and expectations and all that sort of stuff, not just with clients but also, we have all Aboriginal clinic managers so that that was part of fitting in the team.” (Clinical Director)

Pharmacists having had previous relationships with hospitals and local community pharmacies helped facilitate communication between the different health care providers and build better relationships.

“I think it really we have made a big effort to improve our relationship with the community pharmacy. I worked in the community pharmacy that had the QUMAX account for 10 years. I had a good relationship with them anyway and that was where I was doing my locum work mainly. But some of the others you know and [town] is a small place for pharmacists so we all know. But they all love having us here. It's made it much easier for them to do their Webster Paks mainly, that's the big thing” (Pharm17).

“... I think she obviously got massive support around her from being in community for a long time. She's got ties everywhere. So she's the ideal person for that job.” (Medical Director)

Pharmacists' ability to translate the role into practice

The pharmacists who felt they were successful in the role understood the requirements of the role, were proactive, and initiated relationships and the provision of education to staff. They just got on with it, *“like a dog with a bone”* (Medical Director).

“We had orientation, but we were all heading into different settings and, I wasn't quite sure. My role here is much broader than I had expected. I had thought it was just going to be a clinically supported role to the GP essentially, patient education things like that, but so much more, which is great, I love

it because there's the education and clinical going on here. There's a lot of patient care education that sort of stuff, monitoring pathology making sure that's all followed up" (Pharm02).

Possessing HMR accreditation

Some accredited pharmacists felt that HMR accreditation had provided them with extra knowledge and confidence to conduct medication reviews.

"I think you need to be accredited in HMRs. There's a lot of knowledge that you need from that ... I don't think I would have had before I did that [HMR accreditation] training." (Pharm04)

The outcomes from HMRs were valued by the clinical staff and also enabled the health services to obtain income. This was highly valued by the health services.

"recommendations were balanced and evidence based with a thorough understanding of not only the pharmacological reasons behind the changes but a deep understanding of the individual patient factors that influenced their suggested changes." (GP)

Prior engagement/experience with pharmacist

Some services had prior experience with a pharmacist occupying different roles to the IPAC project. This helped with relationship building, and health service staff understanding of the pharmacist roles other than dispensing. Understanding the pharmacist's role resulted in more support from health service staff with patient recruitment into the project.

"We also both [approached] the patients that we already knew. So if we saw them in the clinic we went 'oh you know we're here now on this trial. Would you help us out because it'll help keep us in the clinic, this is what happens.' So, having that 18 months of already meeting some people helped a great deal to recruit people." (Pharm11)

"[IPAC pharmacist] worked in the organisation for some time which you learn a lot on the ground. And [IPAC pharmacist] had been working at [another ACCHS]. So it was about getting the right people. And so that goes to communication style and expectations and all that sort of stuff, not just with clients but also we have all Aboriginal clinic managers so that that was part of fitting in the team." (Clinical Director)

Support from the health service

Pharmacists reported the services implemented strategies to help them integrate into the primary health care team and the community:

- Introductions to staff in key roles and community members

"They encouraged me to go to the elders' group when I first started. So that was probably the best thing, because by going to the elders, if they accept you, they will spread the news and gossip like there's no tomorrow. So, I think being encouraged to go to that and going with me to introduce me to those key people. Definitely helps that situation to get into the community" (Pharm04).

- Wearing the health service uniform or shirt helped embed the pharmacists into the team, gain respect and acceptance into the community.

"Man, it makes a big difference having the shirt. You are part of the team, you're one of the good guys. It's really good." (Pharm20)

"As soon as you have this blue shirt on everyone knows that you're a safe person to talk to." (Pharm11)

"I think actually just even being in a [health service] uniform actually gives people, you know sort of, there's some trust that comes with that. So and talking to one of the community pharmacists who was doing our Home Medicines Reviews she would say, she just felt like she couldn't really be effective because people felt on edge, even though they knew why she was there, she wasn't part of our team. Yeah she was sort of an outsider, so she might go to the house but they wouldn't let her inside the house. So then you know actually sort of decreases effectiveness. I think it makes a huge difference." (GP)

- Participation in health promotion days and social events helped pharmacists integrate into the team.

"They had a like a barefoot bowling staff social thing and the chronic care clinic and he invited us along to that, and we went along and it just it makes a big difference." (Pharm17)

"Unexpected pluses were: the information stands they did at our NAIDOC celebrations." (GP)

Stable workforce

A stable workforce, in particular GPs, enabled the pharmacists to undertake their role more effectively.

"[The Manager] is very organized around supporting staff and how everything's going. He's very good with that. Very good with looking after staff because if you don't look after staff then you're in a lot of trouble. [The health service is] unbelievably stable, a lot of staff have been there for years." (Pharm18)

Referrals from staff, in particular AHWs/AHPs and GPs

Approaches used to recruit and consent patients included referral from the clinical staff in particular GPs and Aboriginal Health Workers and Practitioners.

"The GPs... they have a lot of patients that come through and they go 'oh wow we could really do with a medicine review'. So then they come over to me and say 'oh [IPAC pharmacist], have you met Mrs So-and-so'. So it's kind of like a referral." (Pharm02).

"The office that we had was in the same corridor as a health worker so it was just like we were part of a team, just went from health worker, to the doctor, to the pharmacist" (Pharm17).

Accessibility

The option for patients to self-refer and book themselves in to see the pharmacists minimised accessibility barriers and helped build relationships with patients.

"I've rang up and asked to see [IPAC pharmacist] and yep, they even booked me in. They said 'oh we'll put you through to [IPAC pharmacist] and talk to [IPAC pharmacist]. Yep come in all right. Come in and walk in the office or knock on me door and [I will] see you'" (Patient).

AHWs/AHPs assisted pharmacist integration

Positive relationships with the Aboriginal Health Workers and Practitioners facilitated integration into the service and community.

"Oh for sure my number one champion would be [Senior AHW] who's amazing, an amazing health worker that probably volunteered in the first instance to help me out. And we sort of hit it off and kind of been mates ever since. We worked very closely together." (Pharm01).

"In terms of being included in the team, the Aboriginal Health Practitioners are really helpful and have been great at trying to find me patients." (Pharm10)

Cultural orientation and local cultural mentors

Pharmacists had generic cultural training facilitated by the PSA. Local cultural programs were available onsite for some pharmacists. Aboriginal Health Workers were commonly informal 'cultural mentors' or were available for pharmacists if they had questions or needed advice. Involvement in the community through elders' groups, NAIDOC week or health promotion activities (groups/community days) also appeared to facilitate better relationships with communities.

"Cultural induction had to happen. I had to really kind of be like 'oh I need it'. So, it happened a couple of months after I started. It was great. It just didn't happen straight away. But the Aboriginal Health Workers here are incredible and outstanding and have supported me whenever, yeah whenever and wherever I needed it. Which is great.... It was one of the elders at the [name of community keeping place] I was concerned about that because you know throughout [PSA] induction we were so well made aware of all of the barriers and cultural considerations that I was concerned and I felt like I wasn't prepared but then I kind of got here and was well supported by the Aboriginal Health Workers and the community" (Pharm02).

"They encouraged me to go to the elders group when I first started. So that was probably the best thing, because by going to the elders, if they accept you they will spread the news and gossip like there's no tomorrow. So I think being encouraged to go to that and going with me to introduce me to those key people. Definitely helps that situation to get into the community." (Pharm04)

Access to Clinical Information Systems (Best Practice and Communicare)

All pharmacists could access the clinical information systems used by the services. This was valuable to facilitate making appointments and referrals and accessing patient information to inform medication reviews. However, it was a challenge when the systems "went down".

"I don't think you could really do the project without access to the clinical software. Certainly for the purpose of gathering all the information that you need to do the med reviews. It's sort of been invaluable" (Pharm10).

Support from community pharmacists

Pharmacists further developed relationships with community pharmacy. They worked together to problem solve, access discharge summaries; confirm medication history, reconciliation and correcting errors, and supply of DAAs.

"I do spend a lot of time liaising with our community pharmacy.... I chat with the pharmacist there and problem solve with them every day I'm here... I'm kind of the translator between the doctors and the other members of the team and the community pharmacy because I speak 'pharmacist' and I speak 'doctor' so I kind of translate in that role a little bit and smooth out any issues" (Pharm01).

"... there's a pharmacist there that I've never met before now I just walk in and we have a joke and I say 'Oh hey I got this for you' and he's goes 'oh great, can you do a HMR on this patient while you're out there'. So, we just we get on really well. They value it... again there, there's a history between here, the clinic and the pharmacy and you know they've had their differences. So they've benefited because I know that I'm only a phone call away and I will pick up the phone nine out of ten times or they can shoot me an email and it's a way that they can get there answer very quickly and get that Webster Pak done or whatever because otherwise they waited for doctors until they're free or they get a return call" (Pharm02).

Induction to the role and ongoing support

Pharmacists were positive in their feedback about the induction training and felt they were prepared.

"It was good to have all the 10 aspects of the role explained and how it was to work. And it's good to have the cultural training as well because coming directly to [service] I wasn't really that aware of Aboriginal culture and all the history and everything. Yes, that was very useful" (Pharm06).

Ongoing support was also provided by the PSA staff in relation to clarifying the core roles, answering queries and using the electronic systems.

"[PSA Staff] have been such good support that you can just flick an email, 'oh how do I do this or what did you say about this' and they'll come back with the answers, so they've got all the answers" (Pharm11).

Support from Peers

Pharmacists highlighted being able to 'meet and greet' each other at the induction allowed for relationships to be developed and peer support provided to each other throughout the project.

"...and to know, to meet the other people that are in the same roles. So, I use that at the beginning when I wasn't quite sure what I was doing, and I knew some of the pharmacists had already been working in services before. So, I was able to give them a call and question things and make sure I was doing what was right, and sometimes it's easy to talk to someone of the same level as you then asking to the people who employed you. "Am I doing this right?" type of thing to bounce ideas off. So, I found that really good, the meet and greet" (Pharm04).

Access to mentors or shadow another pharmacist

The opportunity to shadow another pharmacist in an Aboriginal Medical Service as part of their orientation was excellent in helping a couple of pharmacists prepare for the role. Having a mentor who the pharmacists could contact at any time to discuss questions or issues was also useful.

"It was really useful day because I could see exactly how they were involved" (Pharm05).

"We've had a couple of 'over the phone' meetings where I prepare my questions and she's a pharmacist who actually works at that Aboriginal service in Melbourne. So, she has huge experience and she was available ... I just email her or ... even sometimes we have about an hour conversation over the phone. But like I would probably add my questions, lots of things that you know about the culture. And she was very, very helpful" (Pharm05).

Posters helped raise awareness

The posters provided by NACCHO and placed within the health service did help raise awareness of the project and the pharmacist for both staff and patients.

"The posters, that was great because they put them up in all the GP rooms and they were constant reminder to utilize the pharmacist" (Pharm09).

"They [the patients] do know our faces from the poster, the poster was wonderful and if you ever do it again I reckon put a bigger picture of the faces, as much as we might not like it, but a bigger picture of the faces because they really do 'Oh I saw you on that poster' you know so it's the posters they're great!" (Pharm11).

Space/clinical room

Many pharmacists, but not all, had their own dedicated room which enabled them to see patients. Some pharmacists shared spaces with other staff which assisting with team integration but restricted the ability to

have private consultations with patients. Others had to change rooms depending on other staff in the service on a particular day.

"I do but it's not always the same room. It just depends on how many staff they have and I sort of get the least important one for a room I guess. Yeah but yeah I always have a room" (Pharm03).

Pharmacy technician support

One service had a pharmacy technician who was able to support the project implementation.

"Before IPAC started her role was to help with the referrals for HMRs. So, she did kind of all the background and the paperwork in forwarding the referral to the HMR pharmacist and then receiving the report and then letting the doctors know of the report. So, we just kind of modified that slightly for them, our referrals so she helps us. So, she gets a report of the referrals. She lets us know. We've actually recently changed it so that she actually contacts the referred clients and finds out where they'd like to see us and books them into us because that ...takes up quite a lot of time that kind of admin stuff. So ... she's been a big help there" (Pharm21).

3.6.2 Challenges

Services not ready for the role/project

Some pharmacists perceived that their ACCHS was not necessarily ready for the pharmacists. Issues contributing to the degree of readiness of the health service included key people weren't at the service when the pharmacist started, staff turnover, physical space, 'political chaos' and other current priorities such as building new facilities.

"I think the difficulty with this project has been that it's a very new role for a lot of these clinics and the staff out there had no idea what a pharmacist did" (Pharm10).

"I just feel like the site was just a bit, they weren't prepared for the pharmacist" (Pharm02).

"I think one problem was you know she just got dumped into this really. We had no idea what she was really going to do, and I think we made a lot of it up" (Medical Director).

"And look I didn't even know much about the project when she first started either..." (Director of Health Services).

Changes within health services posed challenges for some pharmacists including political chaos, restructures and sudden dismissal of staff members. In addition, Aboriginal and Torres Strait Islander patients were not necessarily choosing to seek health care from some ACCHSs.

"The day I started I was driving down the road to the news in the morning that said the board and the senior management at [health service] had just been sacked" (Pharm12).

"There's been a lot of disharmony I suppose in the community in regards to the services that [health service] were providing and how they were providing their service which is why all of these changes have happened. Yeah. So, I guess there's generally a lot less people coming in to the clinic" (Pharm19).

Staff engagement and not valuing the role

Staff members of the health services didn't understand the role of a pharmacist and what they could do. There were stereotypes that pharmacists just handed out medications. Staff members didn't see the value in the role, especially in the early stages. It took some time for pharmacists to prove their worth and settle in to the team.

"And even the staff in the clinic wasn't very welcoming in the beginning to the idea of having a pharmacist among them and they didn't know what I am doing and that that's why it took me from the beginning to just educate them and let them know about my role" (Pharm08).

"I was doing that over two days but I actually found that it was really hard to get the staff to see me as part of the team just being out there twice a week so I elected to spread my hours over three days." "Once I switched it to three days which I didn't sort of do until I think it was about five or six months into the project the staff started to think of me being there more often than not." (Pharm10)

"I received written information about this project prior to completing this survey, it would have been good to get that information at the beginning of the trial, prior to this all information I received was verbal and informal, I did not get any training." (GP)

"Challenges with implementing the IPAC project was educating staff/clients on what exactly was the project and how it worked. Also how clients were to access services. Getting everyone on board with the process." (manager)

"I think she did struggle in the beginning. I don't think she was respected with what she was doing and especially down here [at this clinic]. She was forced around and there were a few bad days for her where you know people were pushing her out of rooms and didn't value her work. I think she's done really well to make herself [part of the team]." (Medical Director)

However, it was noted by one service that the IPAC pharmacist had become one of the more stable staff members. This meant when other staff changed (e.g. locums, registrars), the pharmacist was already embedded into the service. Having a pharmacist in the team was 'business as usual' and the new staff didn't know any difference.

"When I started we had lots of locums as well. We weren't familiar with the patients or medications, so [IPAC pharmacist] was actually one of the stable people that was around all the time. She had seen patients before and she knows them and can tell me about what their medication issues are before I meet them. So that was really helpful." (GP reg)

Workforce retention and locums

Retention of staff within the health services, in particular GPs, was a challenge. Locums did not always understand the pharmacist's role.

"It's the most, the most challenging thing that was happening there was the doctor because a GP was coming every two weeks, a different GP with different experience" (Pharm08).

Limited flexibility to use the IPAC pharmacist as service required (considering project objectives)

Some services used the IPAC pharmacists to undertake other important tasks outside the 10 core roles.

"So, I guess from a project perspective what the intent of it was, was for it to be more client focused around quality use of medicines and quality prescribing and that kind of stuff. And I think we're finally kind of six months, seven months in, actually getting [the IPAC pharmacist] up to that point. But what we have to acknowledge first was that being such a big service across five different centres in four different communities there was a whole heap of systematic stuff internal that we needed sorted out first. Given that we're providing section 100 services out of four of our sites. We needed, I guess the pharmacies, the pharmacist's eye over what it was that we're doing and that took up at least the first half of [the IPAC pharmacists] workload. Now that we've started to get those systems in place and the management supported those systems, [the IPAC pharmacist's] actually finding time to spend with patients which is great" (Director Health Services).

"I think coming in I was very like no I need to meet these targets. I can't do anything, you know, very projects based. So, I think if I had my time over again, I'd just say you know use me as a pharmacist to the best of the capabilities that their service needs. I think early I kind of pushed back on a few logistical things... But now I've found that ... I'm not probably as integrated as I could be ... I don't really understand how much scope we had to deviate from project protocol" (Pharm16).

Managing requests to participate in non-IPAC activities

Pharmacists mentioned that they did sometimes undertake activities outside of the 10 core roles.

"I think early I kind of pushed back on a few logistical things like resuss trolleys and like, following up every man and his dog who has a short prescription of metformin and swapping them over, and those types of things that I've said. You know guys, you kind of need a process and I can support it, but I can't do these things by myself because the project is patient based" (Pharm16).

"I guess my understanding of the project and what we have actually had [IPAC pharmacist] doing are two slightly separate things." (Director of Health Services)

Travel and time in remote communities

A challenge for some sites in the more remote locations was the need for the IPAC pharmacist to travel to the site and also to different communities. While this may have worked out quite well in some instances, it did take time and money.

"It actually wasn't based at the health service, it was the opposite. It was working in the community ... We were only there [at the health service] really one day a week. The rest of the week we were actually going out working within the communities ... you carried all your boxes and [into] Hiluxes and a couple of RNs and myself if I was on that particular run would go out to a community and work out there. ... the time to communicate one on one with people that was difficult, to have adequate time, because you'd only go to one community the nurses would stay a day. ... you're going around with them, you just grab those opportunities when you can. But it does limit you. It's none of this appointment system or I'll take this number of hours with somebody and then some hours with somebody else." (Pharm22)

"The doctor goes there [community], it's every Thursday and only one day and then they come back in airplane the same day. So I go with them." (Pharm24)

"I have to get a ferry over to get to [town] from where I am on [town]. A lot of my time is travel as well. ... So it's a one-hour ferry, sometimes a little bit longer so maybe an hour or so each way. And then driving, it's about a 20-minute drive from the wharf to [town], so it's about an hour and a half each way." (Pharm07)

Team spread across multiple sites/buildings

Some sites had multiple buildings and clinic sites which meant that it was sometimes difficult to have regular contact with all staff or even know all staff.

"There's two GPs that work at the health centre. So, the GP clinic, it's quite small. There's not enough room for us... And then the other site that we work from is which is mainly where the IPAC pharmacist is based. There it's called a healing centre. It's probably about 100 meters down the road. Maybe a little bit more, and that's where they have all the allied health people that come and visit" (Pharm14).

Pharmacists from Community Pharmacy balancing responsibilities

Pharmacists who owned or were employed by community pharmacies faced challenges balancing IPAC requirements with other business requirements.

"It was meant to be two days a week. Yeah. It was 0.4 [FTE]. But then we had one full time pharmacist resign from [town]. I had my intern resign from [town] and then a pharmacist resigned from [town] which we still haven't been able to replace. So, I couldn't do two days a week. So, I've done one day a week" (Pharm07).

No local induction

Just under half of the pharmacists stated that they did not receive a local induction when commencing at their local health service.

"Maybe induction into the health service wasn't... It was kinda, I was just like dropped in it. It would have been nice to have a more formal you know, introduced to everyone and their role and you know even the computer system and all that kind of stuff. I was just kind of left to my own devices because again everyone was busy. So that would have just been a bit nicer" (Pharm13).

Not knowing the local community or families

A challenge was also not knowing the local community or family's very well as the pharmacist was only in town for the IPAC role.

"For me it was a kind of learning process in the beginning about the patients trying to memorise names of the worst cases... knowing the families, which was a big part for me to learn, to understand that this family is having all these members. That was another challenge ... the local knowledge would have helped with that. But there was no one who from the local professionals [pharmacists] there wanted to join the project. So that's why the PSA recruited me" (Pharm08).

Patient recruitment and follow-up

Issues related to health services included the small patient base (especially at smaller services), renovations, black-outs bringing down the IT systems, staff didn't understand the pharmacists' role and weren't valuing it. There was also staff turnover, staff shortages and locums. Reputation of the health service and a lack of trust were also issues raised by a couple of pharmacists. Comments from pharmacists included:

"The other thing that impacted and probably still continues to impact to a slight degree but I kind of now speak up, is the admin staff ... they know to keep patients back for the nurse, they know to keep them back for the GP, but once they've seen a GP, if I'm with another patient they just let them go because they don't value pharmacy. Their admin probably don't know what we do and so I have to literally go out there and badger them every day. And sometimes like at no fault of their own the GP will, you know, I will say to them 'hey, I'm going to see that patient after you and then they forget" (Pharm02).

"I found out that Aboriginal people go everywhere [to lots of different health services] they don't just go to the Aboriginal Health Service ... there was a question why they go to everywhere, if they have a lot of services coming to them in the health service, but there was no answer ... They don't know. It might be because of the locum GPs." (Pharm08)

Patient-related issues included transience, language barriers, sorry business, presenting opportunistically and being overwhelmed with appointments. Several pharmacists commented that patients moved around a lot including going to their homelands.

"There was no Aboriginal Health Worker. Nobody in the health service could speak more than a few words of the language" (Pharm22).

Other issues raised were the complexity of the consent process, time and the IPAC pharmacist being part-time and the effects of needing to prepare for cyclones. Comments made by managers were:

“less paperwork,” “maybe shorter forms” and “it needs to be less wordy.” (managers)

People not attending appointments was an issue cited by most pharmacists across all settings. However, patients who did not attend were common across the clinic, not just for pharmacists. Despite pharmacists accepting that failed attendances were to be expected, people not attending did impact on their ability to undertake their role.

“I found that booking appointments ahead of time didn’t work well, with a number of people not attending these pre-booked appointments.” (Pharm15)

“You might make appointments with people but the number of no shows is the, probably the biggest challenge I think yesterday, it was a fairly full book and in the morning went along to the doctors there but I think 80 percent of them didn’t show.” (Pharm12)

“I think one day I had like five booked in and not one turned up. But it happens in the allied health as well, so ... I book them in on the day they come in for allied health thinking that’s a good day to get them and they just don’t turn up for anything” (Pharm17).

“[IPAC pharmacist would] like to try and get people as I say while they’re here because it’s quite hard and you can book them but they DNA [do not attend] ... for all of us. It’s just the nature of our clinic we get a lot of DNAs, so [IPAC pharmacist] was always very keen to get them [patients] pretty much immediately. And if she couldn’t see them then and there she would come out and talk to them personally to I guess encourage them to come in for the appointment in the future.” (Nurse)

Another reason for failed attendances cited by some pharmacists was the number of appointments that patients had to attend, particularly patients with kidney disease.

“Because they weren’t coming as often, when they were here, they were already trying to do everything else. But then if they have already been here for three hours and then I’m sort of trying to tack on to the end of that it was like, do I have to? And of course not. So if there was an option there to, to leave then they would definitely take it” (Pharm19).

“These patients get completely overwhelmed by the health system and have very little health literacy and no ability to navigate their way through multiple referrals and so I see my job more than anything, as pulling things together.” (Pharm23)

Logbook and data entry requirements

There were mixed responses regarding data entry and the logbook. There was confusion around where to log activities in the logbook including activities that were outside the project. Some activities weren’t logged due to workload, the time it took for data entry, and limited internet access. One pharmacist reported issues tracking patients where data was documented in different logbooks due to a job share role.

“You know I still don’t think we catch it all, especially in those early days because it was just so overwhelming. Trying to find spots to put stuff in I found was hard because it was a lot of stuff that we were doing that I couldn’t really find” (Pharm17).

“I think it’s a very time consuming... It’s question by question by question and I do this because it’s best to obey anyway ... [it’s] the only way ... you can measure you know our work. So, we have to do it” (Pharm24).

Data entry was also a time consuming process with many pharmacists reporting they undertook this task in unpaid time.

"The logbook I think has been quite laborious and has perhaps sometimes taken away from time that I could have spent you know being more useful in the clinic." (Pharm10)

"I think it takes a lot of time compared to when you when I could be doing actual work." (Pharm19)

"Seems [the IPAC pharmacist] was spending very extended hours doing paperwork and working far more than she was paid for, potentially the referral process was difficult for her to keep up with?" (Manager)

Employment characteristics

Being part time impacted upon pharmacists' abilities to effectively recruit and follow-up patients, and also participate in other health service activities. There was also a perception that pharmacists were sometimes seen as external to the organisation. Due to pharmacists not being employees of the ACCHS, they were unable to utilise service vehicles.

"Was seen as an external person, not as an employee. Wasn't utilised well due to not being full time and being seen as external." (Pharm08)

"I haven't been given a work car which is kind of... as I'm about to take out a work car insurance policy ... which is definitely a barrier." (Pharm02)

"Health promotion days if they had them on the days I'm here I'll get involved in that. In terms of, if I'm around on days when they're planning things and doing it then there's no problem. It's just a lot of stuff happens on days when I am not here" (Pharm12).

"We were not involved in the recruitment and have not had any management over [the IPAC pharmacist] which has posed some challenges for us." (Manager)

Short project length and funding

Availability of ongoing funding for the pharmacists' position was raised as a concern.

"It scares me to think. And I think it's, it hasn't scared patients but there's a lot of them have gone 'what do you mean [you will go in] November?'" (Pharm02).

"The only issue is the funding when the IPAC is finished. I'm not sure they would feel that there is any funding for me to carry on working with them. Although they would love to have me, I'm sure." (Pharm06)

"This shits me you know, you get a program and it works and bugger me dead if they don't pull the plug on it" (Patient).

"I mean my concern with those kinds of projects is that they funded for a specific length of time and it's almost like they're funded with the plan that they're not going to work, because there's no plan for ongoing funding. So yeah we'll get to the end of the project period, [and] we've already identified that we can't function as an AMS without a pharmacist. So the project stops. We then have to try and find the money to continue with that work, which is really hard to do there" (Director of Health Services).

4. Discussion

4.1 Role

Prior to commencement, the IPAC pharmacists had varying expectations of their roles as non-dispensing pharmacists in ACCHSs as part of the IPAC project. The induction training provided by the PSA provided an expected scope of practice and services to be carried out, although various challenges were experienced in practice. Certain aspects of the pharmacists' role were closely aligned with what they expected, such as the provision of medication-related information and performing HMRs, whilst other activities such as advocacy and participation in disease outbreaks and health promotion, were unexpected.

At the commencement of the project, most managers who responded to the survey reported having a good understanding of the aims of the IPAC project, and the roles and expected activities of IPAC pharmacists despite most health services having little or no experience with non-dispensing pharmacists. However, one manager felt there was uncertainty around the responsibilities of the service as they didn't manage the pharmacist so couldn't control the role and hours of work.

GPs reported a moderate or large difference between what they expected the IPAC pharmacists' role would be, and what it actually was in practice. GPs reported that the IPAC pharmacists' scopes of practice and their involvement in patient care had been far greater than what they had expected. These findings directly reflect literature from previous studies which evaluate pharmacists in primary care, as they also found that the role of a non-dispensing pharmacist is poorly understood [24, 51, 61].

Some community pharmacists were initially confused about the aims of the IPAC project, and the roles and expected activities of IPAC pharmacists. One community pharmacist perceived recruitment of IPAC pharmacists had been undertaken independently of the community pharmacy which worked with the local ACCHS. There was also the perception that the scope of practice of the IPAC pharmacist should be more 'specialised'. Meds checks and HMR's were considered community pharmacist roles.

At the end of the project the majority of GPs, health services staff and community pharmacists had a clear understanding of the project aims and the roles of the IPAC pharmacists. The IPAC pharmacists had been effective in communicating information about their role.

4.1.1 Usefulness of roles

IPAC pharmacists delivered the ten core roles (as listed in Figure 1) and believed that their physical placement within ACCHSs was essential in providing appropriate and patient-centred care. The most consistently performed roles were the provision of advice on appropriate medication prescribing, following-up and amending discharge summaries and prescriptions, conducting HMRs (and other medication reviews), improving patient adherence to medications through education, and the provision of staff education on medication-related topics. Most pharmacists felt fully utilised in their service, and their skill set was broadened by the experience in the IPAC project.

The most useful aspects of the IPAC pharmacists' role described by the GPs included medication reviews, counselling and education of patients about their medication use, timely GP access to a pharmacist's expert advice and knowledge about medications, and facilitating links with community pharmacists. Similarly, the most useful aspects of the IPAC pharmacists' role described by managers were the provision of medication reviews (including HMRs), education for patients and staff, following-up with patients, improving patients' medication adherence, improving relationships with stakeholders, and having access to a medicines expert. Community pharmacists also reported the IPAC role was helpful to facilitate communication with GPs, improve referrals for HMRs, increase the interest of patients in their own medicines, and facilitate eligible patients receiving a dose administration aid.

Half of the pharmacists felt that they had met the ACCHSs requirements. The other half were unsure, or stated that they were not able to meet expectations, which was perceived to be a result of being a person external to the health service. A few pharmacists indicated that they had exceeded the ACCHSs requirements and had become an integral part of the health service. Managers and GPs reported that the pharmacists had met the ACCHSs requirements with an average rating of 8.7 and 9.6 respectively (using a rating scale from 1 being not well at all; to 10 meaning very well). Both the Medical Director and the Director of Health Services at one site visit said that they could not imagine being able to run the health service without a non-dispensing pharmacist as part of their team. This sentiment conveys the value of the role and the understanding of the scope of practice.

4.1.2 Activity outside the role

The IPAC project's structured framework constrained the activities of some IPAC pharmacists. However, some pharmacists reported being involved in activities that were outside the scope of the ten core roles of the project. Roles perceived by the pharmacists to be outside this scope included advocacy for patients, responding to acute disease outbreaks, and other health promotion activity. Managers reported that they used the pharmacists to develop policies and procedures, manage pharmaceutical impost systems, participate in clinical governance meetings, and visit other agencies not involved in the project as these were health service priorities at that point in time. The need for pharmacists to attend to these other health service demands explained why managers and some pharmacists perceived there was limited flexibility in the IPAC pharmacists' role. However, the IPAC pharmacists felt there was value in undertaking these activities to help facilitate their role and integration into the service. In one case study the Director of Health Services and Medical Director acknowledged that activities were outside the role of the IPAC pharmacist but needed to be undertaken so that the IPAC pharmacist could effectively deliver patient-centred care.

4.2 Integration

Non-dispensing pharmacists working within ACCHSs enables integration of medication services with the existing primary healthcare team [20, 21]. The co-location of pharmacists within ACCHSs facilitated processes that support better integration. These processes included shared access to electronic healthcare records, shared multidisciplinary healthcare team assessments, administrative support, a shared vision, and governance frameworks (such as formal partnerships), [21] to deliver a range of clinical services both directly to patients and to other health care professionals.

Whilst the majority of pharmacists felt accepted and well-integrated within the primary health care team at the time of their interview (approximately six months after commencement), not all pharmacists felt that way initially. About two-thirds of the pharmacists indicated that there were difficulties upon commencement due to staff misunderstanding the role of the IPAC pharmacist which resulted in them being underutilised. Over time, these issues were largely overcome, primarily due to the initiative of the pharmacists in educating staff members about their role in the team and their potential impact on health outcomes for patients. The pharmacists self-rated their level of integration into the primary health care team modestly with an average of 7.7 (on a rating scale from 1: not integrated into team; to 10: fully integrated into team;). Both GPs and managers rated the IPAC pharmacists' integration into the primary health care team higher at average of 8.3 and 8.9 respectively. In-depth exploration at a small number of sites found that health services staff felt the pharmacists had '*become part of the furniture*' and were valued members of the primary health care team.

4.3 Enablers and Challenges

The IPAC project incorporated enabling factors identified in the literature into the development and implementation of the intervention.

4.3.1 ACCHSs and staff

Preparing ACCHSs for the role of the pharmacist was an important task as the majority of sites participating in the IPAC project had not had a pharmacist integrated within the primary health care team prior to the project. The recruitment of health services and their introduction to the project was coordinated by the NACCHO Project Coordinators, whilst the recruitment of pharmacists and their induction was coordinated by the PSA Project Coordinators [58]. Recruitment of ACCHSs involved an expressions of interest process, signing of a contract, a site visit from Project Coordinators and a needs assessment to facilitate preparation for the project and the pharmacist role [58]. Selection criteria for pharmacists being recruited for the project including registration with the Australian Health Practitioners Regulation Agency (AHPRA); more than 2 years' post-registration experience; and post-graduate clinical qualifications or demonstrated clinical experience [58]. The majority of pharmacists participated in a formalised two-day induction program designed to introduce the pharmacists to the project and the IPAC role, facilitate key skills, and cultural training. Pharmacists who were recruited late participated in an individualised program covering the same topics.

After signing the contract and their site visit, some ACCHSs were prepared and had a good understanding of the project and the role of the IPAC pharmacist. However, just under half of the pharmacists reported that they felt their service *'was not ready.'* Service staff did not fully appreciate the value that a pharmacist could bring into the primary health care team. One medical director stated: *"we had no idea what [the IPAC pharmacist] was really going to do."* Not all service staff were aware of the pharmacists' roles and in which activities the pharmacist could contribute. The literature describes how orientation should be provided to prepare health services for pharmacist services, and also for pharmacists to fully understand their role and required competencies [40].

The IPAC pharmacists identified possible reasons for ACCHSs and staff not being prepared for the pharmacist role as being due to the high turnover of staff in the services, the absence of key personnel when pharmacists commenced, "political chaos", and other priorities such as building new facilities. Just under half of the pharmacists did not receive an ACCHS induction or local cultural training upon commencement. This meant that the pharmacist may not have met key staff or receive information on local processes and procedures. It was perceived that communication about the project and the pharmacists' role throughout some health services was inadequate. This impacted upon the pharmacists' ability to integrate quickly into existing teams subsequently limiting the number of patients recruited into the study.

Loss of key staff members (and project champions) and other staff turnover also meant the pharmacists had to continually educate and re-educate staff members on what they could do and which patients they should refer to them for the project. In some services, IPAC pharmacists perceived that ACCHS staff didn't understand the role and therefore didn't welcome them or help them settle in to working at the service. Aboriginal Health Workers and Practitioners were key in some services to integrating the pharmacist into the health service and also into the community. Their role in introducing the pharmacist to people in the community also helped to build relationships with patients.

Without the support of GPs in particular it made it much more difficult for the pharmacist to recruit patients and undertake the roles of the project. Instability of the workforce was a major challenge. Locums did not always understand the non-dispensing pharmacist role.

Lack of professional trust in the pharmacist was initially an issue at a couple of sites. This reflects findings in previous studies where GPs were reticent to refer their patients to the pharmacist [38, 40, 45-47]. However, as the project progressed and the pharmacists' capabilities were recognised, professional relationships grew and trust developed.

In retrospect, the project could have benefited from a lead-in period to provide time for the IPAC pharmacists to develop relationships with service staff and improve their understanding of the pharmacist's role. Services who had had a previous relationship with their pharmacist had a better understanding of the possibilities and value of the role and were able to implement the project slightly easier than others. The literature describes the time needed for rapport building within an ACCHS [44, 45]. The time pressures reported here are only of significance because of the tight time constraints of the IPAC project which put pharmacists under pressure to deliver results within a defined time period.

Many services supported pharmacist integration into the primary health care team through the provision of uniforms, consulting room space, promotion of the role in newsletters and social media, and involving the pharmacists in meetings and events being run internally and externally to the health services.

The provision of the service 'shirt' or uniform offered the perception that the pharmacist was part of the clinic team, and so that patients thought they were part of the service and could be trusted. Some pharmacists did not have a service uniform and while some reported having no issues integrating into the PHC team and feeling accepted by patients, others felt it did impact on how well they were accepted by staff and patients. There was competition for consulting room space in some services, however the majority of pharmacists reported they had access to a space, although this could change on a daily or weekly basis depending on other staff present in the service at the time. Some pharmacists shared spaces with other staff which was good to assisting with team integration but restricted the ability to have private consultations with patients. 'Strategic positioning' [40] or being in close proximity to the GPs was beneficial to integration into the PHC team, to facilitate communication, prompt referrals, and to provide medication advice. Some pharmacists reported having an office close to the GPs.

Pharmacists actively attended clinical team meetings and education sessions which assisted in building trusting new relationships [48]. Some pharmacists also attended women's groups, elders' groups, community events and social activities. A few pharmacists took the 'strategic loitering' strategy seriously and would regularly hang out in the waiting room to see which patients they could engage in discussions about medications while they were in the clinic. The majority of pharmacists were also willing to engage in corridor conversations with staff and be interrupted to discuss queries.

All pharmacists had access to the health services' CIS. Pharmacists reported that access to patient's medical records was essential for their role, in particular to conduct medication reviews as has been noted in other studies [32, 50-52]. Most pharmacists recorded their medication review recommendations and/or submitted their reports via the CIS allowing streamlining of processes and information transfer. Pharmacists in some sites experienced difficulty with setting up appropriate levels of access to the systems. Like other staff, pharmacists also experienced unstable internet connections and in some remote communities had no internet or access to the CIS while in outreach clinics. As many pharmacists were new to using the clinical information systems (Best Practice and Communicare) further training in induction would have enabled them to use the systems more efficiently.

Referrals from GPs and also Aboriginal Health Workers and Practitioners was a successful approach to recruiting patients for the project. Where there were locums or staff turned over regularly, and a lack of understanding of the non-dispensing pharmacist role, this impeded effective implementation of the project. Some pharmacists also reported there was confusion from other staff roles in the clinic, particularly nurses, who may have been tasked with pharmacy related roles prior to the project. This supports the literature which found nurses may feel threatened by the role [53]. One service employed a pharmacy technician who was able to support the IPAC pharmacist with administrative tasks including following-up referrals and making appointments for patients in relation to HMRs.

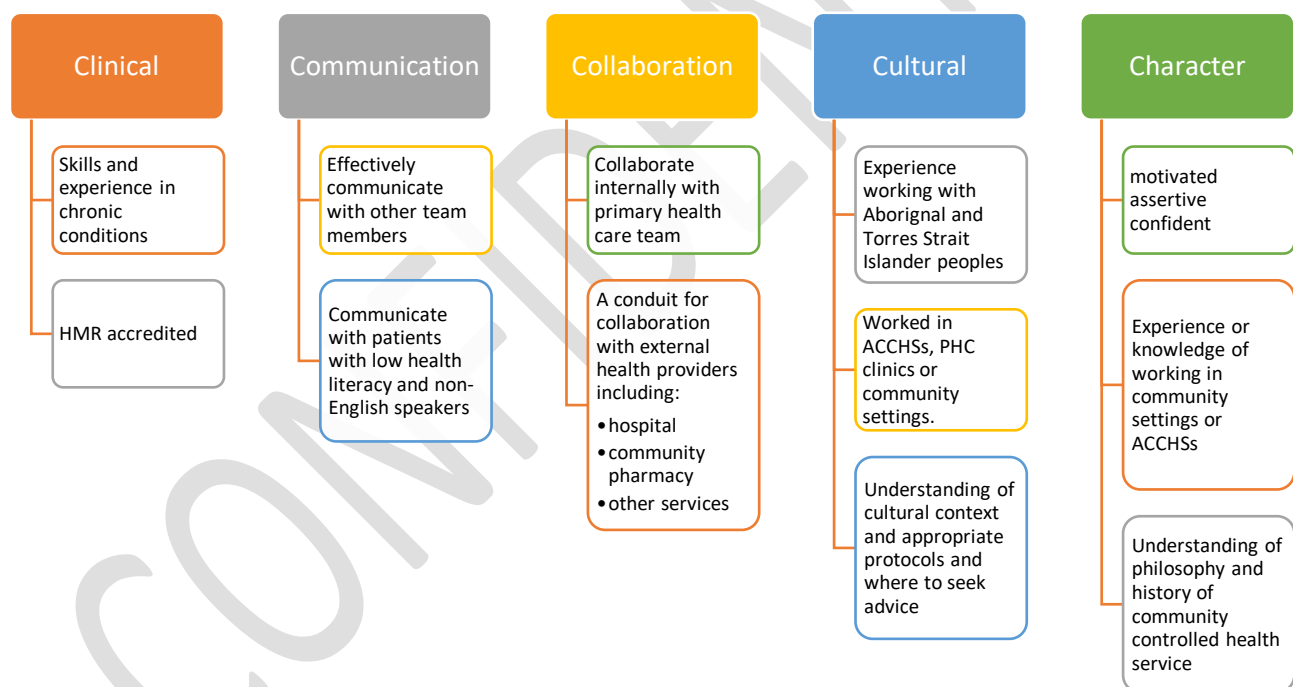
Many of the enablers identified in the IPAC project are similar to those described in the Integrating Models of Pharmacists Across Care Teams Framework. [1] Addressing these factors in preparation for an integrated pharmacist would facilitate better understanding of the role and minimise barriers.

4.3.2 The pharmacist

A recurrent theme identified from managers, GPs and other health service staff in this evaluation was the need to get ‘the right person’ for the role within ACCHSs. Having a pharmacist with the right ‘*organizational fit*’ and right personality was just as important as their skills and experience. As well as having clinical skills, pharmacists needed to be culturally appropriate, able to develop relationships and build rapport and to be flexible, non-judgmental and resilient. They also needed to be confident and understand the need to proactively engage with people to make the role more effective. The IPAC pharmacists also identified these skills were required to effectively fulfil the role.

The IPAC study results were consistent with the findings of other studies where motivation, assertiveness and confidence were identified success factors in pharmacists integration within healthcare services [1, 48], [42]. Pharmacists having particular personality characteristics (designated as ‘character’) was considered one of five key factors required to be effective in the IPAC pharmacist role. The other factors were categorised as clinical, cultural, communication, and collaboration skills (see Figure 19).

Figure 19: Five key factors for pharmacists to be effective in the IPAC role within ACCHSs.



Strong **clinical** skills and prior experience working as a pharmacist were essential for the IPAC role. HMR accreditation was highlighted as an important asset both from the perspective of having skills to undertake medication review and counselling with patients, as well as from a billing perspective for the health service.

Some IPAC pharmacists had worked with Aboriginal and Torres Strait Islander people previously including some in remote communities, while others had very limited experience. Previous experience living or working in the community resulted in the pharmacist already having knowledge of the local **culture**, and established networks and support systems which also enabled them to settle into the role, and progress quickly and effectively.

Cultural training focused on the local community was valuable, as was access to a cultural mentor. All IPAC pharmacists were given generalised cultural training, but just over half of the IPAC pharmacists received additional local cultural training. A challenge for those pharmacists new to their service and town was not knowing the local culture, community or families very well. All IPAC pharmacists were given the option of being matched with an experienced Aboriginal Health Services pharmacist to act as a mentor throughout the first six months of the intervention phase. Eleven pharmacists opted to participate in this formal mentoring arrangement (arranged by PSA project coordinators via the PSA Mentor Hub) [69] while others felt they could seek out information to supplement what they had learnt at cultural orientation with a local staff member, including AHWs/AHPs. Mentors helped to answer pharmacists' questions about clinical and cultural matters, and where the mentor was a local AHW/AHP, also assisted with introductions to patients and the community. Some did not take up the offer of a formal mentor as they felt their prior experience prepared them well for the role. Patients and ACCHS staff did not report any significant evidence of the pharmacists being culturally incompetent or unsafe. Managers and GPs both rated the pharmacists as being highly cultural sensitive with an average of 9.3 out of 10 (on a scale where 1 was not sensitive at all to 10 being very sensitive). One GP indicated their pharmacist would benefit from further cultural training.

Communication skills were important when communicating with health services staff as was the ability to adopt different styles for different health professionals within the team and for patients. Being able to 'talk doctor' and 'talk pharmacist' was an advantage. Pharmacists also needed to be able to communicate well with patients with varied levels of health literacy, education and for some whose first language was not English. Pharmacists possessing listening skills was noted as an important aspect when communicating with patients.

The pharmacists being able to **collaborate** and work effectively with colleagues from various professions was important to being a part of the primary health care team. Some pharmacists reported being involved in case conferences with GPs and other health services staff. Relationship building and communication with external health care providers including hospital staff, community pharmacists and specialists was also a significant part of the role. Relationships with were further strengthened through the project.

The pharmacists reported induction to the project and role was important and prepared them well. Previous experience with the service or local induction were enablers for some pharmacists and enhanced their ability to make immediate and rapid progress upon commencement, in services that were also prepared for the role. However, for just under half of the pharmacists who didn't receive a local induction, meet key staff or there was a lack of awareness of the project and the pharmacists' role, this impacted upon the pharmacists' ability to integrate into existing teams quickly. Some pharmacists were described by health services staff as 'dogged', and were persistent and resilient which helped them to navigate challenges they encountered.

Another enabler for pharmacist integration was the support provided to them by the PSA Project Coordinators. Responses to the pharmacists' queries was valuable and timely and allowed the pharmacists to continue their work without delay. Pharmacists participated in a peer support network established by the PSA Project Coordinators using app technology, which enabled them to develop supportive relationships with other IPAC pharmacists in the same role.

For some IPAC pharmacists, being part-time reduced the availability of opportunities to effectively recruit and follow-up patients, and also to participate in other health service activities. Travel to clinic locations in remote communities also impacted on the time a few pharmacists had available to see patients. The pharmacists in a small number of sites had to share travel arrangements with other staff, who only visited communities one day a week or less often which made patient recruitment and follow-up difficult. The research component of the role and the requirement for pharmacists to enter data on a daily basis was also a challenge in the project.

4.3.3 Community pharmacists

Many ACCHSs already had strong existing relationships with their local community pharmacies prior to commencing their participation in the IPAC project. Several pharmacies had QUMAX arrangements in place- a program that requires agreements with community pharmacy to support quality use of medicines activities and one reported relationships existed through Section 100 arrangements.

Whilst one community pharmacist stated that IPAC pharmacists were recruited independently of the community pharmacy, the project's recruitment algorithm demonstrated liaison with community pharmacy in the establishment phase, as well as the principal of self-determination enabling ACCHS selection of their preferred pharmacist. [69]

Some community pharmacy respondents reported being confused in the early stages of the project regarding the IPAC project aims and the roles of the IPAC pharmacists. However, IPAC pharmacists worked together with community pharmacists to problem solve, access discharge summaries, confirm medication histories, reconcile medication lists and correct medication errors, and supply DAAs for health service patients. Half of the community pharmacists responding to the online survey reported that contact with IPAC pharmacists was infrequent, however quantitative data collected in the project is evidence of significant interactions between the stakeholders. [70] Interactions further strengthened relationships with community pharmacy. Community pharmacists also stated that they felt patient knowledge of their medicines and adherence to medicines had improved since the IPAC pharmacist had commenced within the ACCHS.

From the viewpoint of the community pharmacists, the overall effectiveness of the IPAC pharmacists was high, scoring an average of 8.7 out of 10 (on a scale from 1 to 10 where 10 was very effective). The IPAC pharmacists were seen as being very helpful, useful, and a great conduit for communication with general practitioners within the ACCHSs. All community pharmacist respondents to the online survey believed that there are roles for non-dispensing pharmacists within ACCHSs.

Some of the IPAC pharmacists were seconded from their roles within community pharmacy to undertake the IPAC role. Whilst this worked well for some, for others it was a challenge as responsibilities remained in the community pharmacies which they owned or in which they worked. Staff retention in their pharmacies impacted upon their abilities to fully participate in the IPAC role.

One community pharmacist reported that a strategy to continue the role within ACCHSs would be for the section 100 community pharmacy allowance to be increased to facilitate the community pharmacy being able to provide additional support to the team and patients of the health service. The benefit of this model would ensure the pharmacist also had support and back-up from colleagues and would reduce professional isolation.

4.3.4 Patients

IPAC pharmacists across many services reported that patients who did not attend appointments posed a challenge to meeting recruitment and follow-up targets for the IPAC project. Appointment schedules were commonly used by clinics, together with opportunistic care. However, appointment schedules may not always be appropriate for Aboriginal and Torres Strait Islander people. This was a challenge for many health services as a whole not just for the IPAC pharmacists.

One reason for failed attendances cited by some pharmacists was the number of appointments that patients had to attend, particularly patients with kidney disease. Another reason was that patients often presented irregularly to health services and often resulted in patients being seen by many health professionals when they did present, in order to deliver opportunistic care.

At one ACCHS, health system changes led to increased patient attendances, but the backlog in patient follow-up meant that it was hard to add-on a pharmacist consultation when these patients had already been assessed by other staff who had taken up all the patients time.

At another service it was reported that a portion of their clientele only ever presented opportunistically and liked to “fly under the radar” and “just want to come in, get their script and get out the door”. These patients were very hard to engage in the health system generally, and consequently for the project.

Other patient-related issues that influenced follow-up included patient mobility, language barriers, and ‘sorry business’ that required patients to attend to funerals and other community obligations. Several pharmacists commented that patients moved around a lot including going back to their homelands or to visit family.

A couple of pharmacists also stated that Aboriginal patients were subjected to numerous projects and experienced a revolving door of health practitioners. One IPAC pharmacist reported that many of the local Aboriginal people attended other local health services with the likely reason being due to the continuous engagement of locums at their ACCHS. Reluctance from Aboriginal people to become involved in ‘yet another short term project’ was also experienced in a couple of sites.

The complexity of the consent process and the need for written consent by patients enrolled in the IPAC project was identified by some ACCHSs as a barrier to patient recruitment, particularly in areas where health literacy or language was an issue.

Some patients were initially confused about the role of the IPAC pharmacist. However, patients who had been exposed to a non-dispensing pharmacist or had a HMR previously, had a better understanding of the IPAC role. An enabler to follow-up was that some patients felt comfortable to see the IPAC pharmacist, and to make appointments, after their initial interactions with them. Many of the IPAC pharmacists developed trusting relationships with patients who would ring the pharmacists with queries. The pharmacists also reported patients were actively engaging in their consultations. This was particularly evident at one site where the pharmacist would seat the patient in their chair, invite them to read their files and facilitate the patients’ contribution into decisions about their care by participating in their consultations with the GPs.

4.3.5 External factors

The limited time frame and lack of surety about project sustainability were ongoing challenges for this project. The uncertainty about how pharmacists’ positions would continue to be funded beyond the end of the project impacted upon some GPs willingness to refer to the pharmacist when the role would only be there to provide services for a short time. There was also considerable concern from pharmacists as to who would provide pharmaceutical input including following-up patients and providing education once their roles had finished.

4.4 Benefits

ACCHS staff, patients and pharmacists identified many benefits to having a pharmacist integrated within the ACCHS.

4.4.1 ACCHS Staff

Health services staff cited that having access to an in-house medicines expert was very beneficial as it enabled them to seek advice quickly about medication queries through informal conversations and in-depth feedback through formal medication reviews. The IPAC pharmacists stated their ability to access the patient’s history and information in the CIS enabled them to undertake a more informed review of medicines, relevant to the patient, and taking into account their social situation and other contextual factors. GPs and IPAC pharmacists also highlighted the benefits associated with pharmacists undertaking other medication reviews, for example ‘medication appropriateness’ audits. Both IPAC pharmacists and GPs reported that recommendations were commonly made by the IPAC pharmacists as a result of medication reviews. The recommendations were perceived to be of high quality and take-up of the recommendations by prescribers was said to be high.

As a result of these reviews, patients were recalled using various methods, dependent on the urgency, and prescribing changes were made. Urgent changes to medications based on pharmacist recommendations

were generally communicated in person or by phone to the patients' GP either as soon as the review was completed or while the patient was still in the clinic. Non-urgent recommendations were implemented by making an appointment for the patient with the GP, or made the next time the patient presented. The IPAC pharmacists and GPs reported that working relationships between themselves were enhanced through this process.

GPs reported that having a pharmacist as part of the health services team saved them time as the pharmacists were able to provide education to patients around their conditions and how their medications worked. They answered GPs medication queries. On some occasions the GP could then resolve patients issues whereas previously they may have referred the patient to see a specialist. The in-house role of the IPAC pharmacist meant GPs at some sites were saved time as they could refer patients to the IPAC pharmacist for HMRs. A couple of IPAC pharmacists previously conducted HMRs for their service as an external provider. This sometimes expedited the process time for patients and clients and the HMR was perceived by some GPs to be completed quicker. The pharmacist would inform the GP of the medication review results earlier (usually in person), and any medication changes could be implemented immediately.

Some health services staff had ideas to improve their medicines services. One manager stated they would like to see the cap on HMRs lifted so that ACCHSs could have as many HMRs done for their patients as they needed. One GP suggested that patient consultations conducted by the pharmacists could attract an MBS item for the work attended by the pharmacist (time based) thereby assisting to fund such a position.

Health services staff benefited from the pharmacists having input into their clinical team meetings and providing education sessions. The pharmacists contributed to medicines safety and quality assurance activities by conducting drug utilisation reviews and assisting in developing and reviewing policies. As noted earlier, GPs at one site invited the pharmacist to participate in consultations with patients. At another site, the Medical Director facilitated the pharmacists' input in clinical governance meetings and drug reviews. The critical enabler for these activities was the pharmacists up to date knowledge on medications.

4.4.2 Patients

Stories told by patients and carers related evidence of their interactions with the IPAC pharmacist, how they had worked with their other health care providers, in particular GPs, and the positive outcomes that had resulted. On several occasions patients reported that the pharmacist had been able to suggest alternative or a different combination of medications that has resulted in them *'feeling better'*. The IPAC pharmacists took a holistic approach to patient care and listened to patients. This meant they better understood their lives and could adapt medication regimes to suit the patients' lifestyle. Patients also reported that their biomedical test results confirmed that their management of their health conditions had improved. The pharmacist and other health service staff concurred that patients' management of the health conditions had improved as had their biomedical test results.

Analysis of biometric measures relating to potential improvements in medicines management and consequently the quality of the care received by Aboriginal and Torres Strait Islander peoples with chronic diseases will be presented separately to this report.

Patients at one case study site identified that having the pharmacist sitting in with them and the GP in their consultations, and being able to discuss the treatment options and be involved in decision-making, was a benefit arising from the project. Patients reported that being able to discuss and negotiate with the clinical staff about what medications to try and the times that suited them to take their medications, meant that they were more likely to be adherent. Patients felt empowered to better manage their health conditions. They better understood why they needed to take their medication and what it was doing to their bodies. In addition to feeling better, patients also reported other benefits of changes in their medications such as losing weight, being motivated to exercise more and engaging with other support groups and the community.

Pharmacists believed that time was also saved for patients as they could be directed to see the pharmacist for queries about their medications instead of sitting in the waiting room for hours waiting to see the doctor.

4.4.3 Pharmacists

The majority of IPAC pharmacists were able to develop meaningful relationships with patients and empower them by developing their health literacy and knowledge about their medicines. A benefit from the pharmacists' perspective was having the time *"to sit down with the patient"* and *"spend a bit more time with patients"*. The pharmacists' roles were designed to be predominantly patient-centred and the majority of pharmacists enjoyed this aspect of the role. It was evident that many of the pharmacists had a passion for providing health services to Aboriginal and Torres Strait Islander peoples and all of the pharmacists asked, indicated they would stay on, if their role was continued. The IPAC pharmacists enjoyed their role and experienced personal and professional satisfaction in the service they were providing. Patients reported telling family and friends about their positive interactions and encouraged them to also see the pharmacist. This indicates the pharmacists were accepted and valued by their patients.

4.4.4 Community Pharmacists

Community pharmacists reported a number of systems benefits arising from the IPAC project. These included an increase in, or improvement in the efficiency of processes for medicines supply; facilitation of communication with GPs regarding prescriptions; improvements in the clinical appropriateness of prescribed medicines; and an increase in dose administration aid preparation and supply.

With regard to patient care, community pharmacists reported that patient participation in HMRs improved, the number of referrals for HMRs increased; there was more support for ACCHS patients; patients had more interest in their own medicines; and more eligible patients were receiving a dose administration aid. The IPAC pharmacist role was seen as being very helpful and useful, and all community pharmacists who participated in the study felt there was a role for IPAC-type (non-dispensing) pharmacist within ACCHSs.

4.5 Project Implementation

In addition to the implementation of the ten core roles, IPAC pharmacists were required to consent patients to be a part of the IPAC project and to collect data on patient interactions, medication reviews and other activity. Induction training provided by the PSA prepared IPAC pharmacists for these aspects of the project. Feedback on this training was positive and the pharmacists felt prepared for their role.

Feedback from pharmacists suggested that training could have included information on how primary health care clinics work and Medicare billing processes used by ACCHSs. It was reported a couple of pharmacists had not worked in a general practice, ACCHS or other primary health care setting previously and they struggled to understand how some aspects of practice worked. Additional training could have included practical advice on 'fitting into' the primary health care team and clinic as this was an initial challenge for some pharmacists. In addition, the provision of local induction to the ACCHS and the local community was important and has been discussed previously.

4.5.1 Patient Recruitment and Consent

Pharmacists found that seeking informed, written consent from patients to participate in the IPAC study was a challenge. Whilst the research team endeavoured to make the information sheet and consent form as short and simple as possible, and plain language forms were approved by ethics committees and NACCHO, the use of these forms was still challenging for some pharmacists, particularly in remote communities where English is not the primary language of patients. Interpreters were not always readily available at these sites. Patients who had low health literacy also were reluctant to sign the consent form.

4.5.2 Resources

The various promotional resources developed for the project were not always used, particularly in remote communities, where health literacy and language were barriers. The posters were used in most sites and feedback found they were a good way to promote awareness of the project or even to just show the face of the pharmacist. Only a few sites used the brochures or videos. Word of mouth was identified as the best way to communicate about the project and the role of the IPAC pharmacist.

4.5.3 Data Entry

All pharmacists were required to enter data for the project in the CIS and a bespoke electronic logbook that was designed specifically for the purpose of the project. All pharmacists had access to the CIS and reported this was valuable to facilitate making appointments and referrals, and accessing patient information to inform medication reviews. However, some pharmacists experienced challenges in setting up appropriate levels of access and utilizing various functions within the systems such as booking appointments, knowing how to put in recalls and generating reports. It was also a challenge when the systems “went down”. As many pharmacists were new to using the clinical information systems (Best Practice and Communicare), further training would have enabled them to use the systems more efficiently.

Pharmacists expressed mixed responses regarding their experiences with data entry and the logbook. There was some confusion around where to record activities in the logbook including whether activities that were outside the scope of the project should be documented. Support was provided from the PSA and JCU Project Coordinators who were able to clarify issues and assist the pharmacists with use of the logbook and correcting errors. Pharmacists reported some activities weren’t logged due to workload, the time it took for data entry, and sometimes unstable internet access. This meant that the activity recorded by pharmacists in the logbook for the project is a conservative account of the actual activity they performed. One pharmacist reported problems tracking patients where data was recorded in a different logbook due to a job share role.

4.6 The Future

The majority of managers, GPs, other health services staff, and community and IPAC pharmacists overwhelmingly supported the integration of pharmacists within ACCHSs. Participants could see the value of pharmacist integration within the primary health care team and agreed there was a role for pharmacists to be integrated more generally in other ACCHSs. Participants observed clear and direct benefits to patients in having a member of the primary healthcare team with the unique knowledge and skills that pharmacists have, particularly in reducing medicines-related incidents, and in providing essential education to patients about their medicines.

Pharmacists generally felt the ten core roles defined in the project were quite broad and did not limit them in any activities they performed within the service, although it was felt that the roles should be expanded to include all ACCHS patients, not just those with chronic disease. The IPAC pharmacists and managers reported that pharmacists were also involved in developing policies and procedures, managing pharmaceutical imprest systems, participating in clinical governance meetings, advocating for patients and visiting sites not involved in the project as these were priorities of the health service at that point in time. Although the IPAC project did not collect data on this activity, this function may be included in future role definitions to enable pharmacists to fully meet the ACCHSs needs.

The recommended number of days per week, or FTE that pharmacists should be employed in this type of position, depended on the size of the health service, the number of active patients within that service, and the number of days GPs work at the health service. Participants suggested flexibility was needed with the option to split days so that pharmacists were available for busy time-periods in the clinic, staff meetings, when GPs were working, and to be able to potentially capture patients when they presented. Many pharmacists felt that it was a full-time position, particularly given the challenges in patient follow-up and the need to be available opportunistically. Future contract models need to be flexible to meet the needs of the ACCHS including those with alternative modes of service delivery in remote communities.

ACCHS staff and GPs said that they found the pharmacists’ role very beneficial for patients and the health service and that it should be continued. Staff from one of the sites were happy to support other health services who were interested in recruiting an integrated pharmacist. The IPAC pharmacists suggested shadowing a pharmacist already in the position and attempting to obtain as much information as possible, beforehand, would be ideal steps to prepare themselves for the role. Maintaining contact with other pharmacists working in similar roles also provided a good support network, particularly if working in remote

areas. IPAC pharmacists used technology (teleconference and phone apps) to establish and maintain a support network between them. Involvement with the community outside the clinic was advised, as well as participating in cultural training and developing relationships with the other members of staff, particularly Aboriginal Health Workers and Practitioners.

All of the pharmacists who were asked if they would continue their employment contracts if their role was continued within their health service, stated that they would. Overwhelmingly, the most common reasoning for this amongst the pharmacists was the enjoyment they received from the role, and personal and professional satisfaction they felt from the service they were providing. This is a key indicator of the successful implementation of the non-dispensing pharmacist role.

4.7 Strengths and Limitations of the Research

4.7.1 Strengths

The project used a community-based participatory research design, to ensure clear benefits to project sites, to ensure acceptability and sustainability of the intervention within ACCHSs, and ultimately, transferability to other ACCHSs. Accordingly, ACCHSs participating in the project were invited to nominate to be a site for the qualitative evaluation. The Project Reference Group members (which included representatives from all participating ACCHSs, NACCHO Affiliates and NACCHO) endorsed recommendations for site selection and also had the opportunity to provide input into the patient and health service staff proformas used in focus groups and interviews.

Pragmatic projects such as this are better able to determine if interventions work under usual conditions rather than under ideal conditions. Gathering data in these real-world environments allowed common issues to be examined in more detail and gather data based on real life stories of patients, which is a powerful and sometimes more valuable approach than gathering purely quantitative data.

The qualitative component of this research drew data from multiple sources, including the IPAC pharmacists based within ACCHSs, the staff of these health services and local community pharmacies with whom the services generally worked. Patients from three ACCHSs told their stories and provided feedback on their experiences. This allowed a more complete picture of the impact of non-dispensing pharmacists and assessment of the enabling factors and barriers on the provision of medication-related support and information. The proformas and surveys used were pre-tested to minimise participant confusion. This resulted in the evaluation identifying a number of strong emerging themes.

The same members of the qualitative team were responsible for conducting the interviews, focus groups and site visits, as well as the coding and analysis of data. This allowed these team members to become immersed in the data and identify key themes, and interactions between the themes, within the large dataset. This process ensured the consistency and the quality in the interpretation of findings from the data. In addition, notes were taken immediately after each interview and focus group to document the major themes identified.

4.7.2 Limitations

The qualitative research component of the IPAC evaluation was limited by the time and resources available to conduct the evaluation. A few of the pharmacists who had been in their role for shorter periods of time, due to having resigned, or being recruited following a resignation, could not fully answer some interview questions.

Some transcription errors occurred due to poor internet connectivity during interviews with pharmacists, and one focus group being conducted outside, which affected the quality of recordings. In general, these errors were able to be corrected and were not significant enough to effect thematic coding. However, it may have affected the grammar of some quotes.

The researchers acknowledge that all ACCHSs are unique organisations serving Australian Aboriginal peoples and Torres Strait Islanders with diverse cultures. The selection of three different ACCHSs for site visits may have highlighted different experiences in the project. Themes from the data collected at the site visits aligned with themes from individual interviews and online surveys supporting the generalizability of outcomes.

As all patient and staff interviews were organised by the IPAC pharmacist and health services staff, this may have led to selection bias, where invited participants may have been more likely to give positive responses. However, participants were also more likely to have been users of the pharmacist's services which is more reflective of the experience. Patients who participated were not influenced by the financial incentive as the gift card was not offered until the conclusion of the interview or focus group. Patients were unaware that this gift would be offered.

Selection bias was unlikely to have impacted other participants as CEOs, Managers, GPs and community pharmacists were invited to participate in the online survey via email. Those participants invited were nominated by the Project Coordinators as they were directly involved in working with the IPAC pharmacist and were in the best position to provide feedback on the role and the project. Not all ACCHSs were represented by participants who responded in the online surveys.

The focus groups were predominantly led by non-Indigenous researchers, which may have resulted in some participants not being comfortable in disclosing aspects of the interactions they had with the IPAC pharmacists, and not wishing to openly criticise the project. However, one of the investigators was an Aboriginal person who also attended the interviews and focus groups with Aboriginal and Torres Strait Islander people, and this may have helped to minimise the impact of this type of discomfort.

5. Conclusion

IPAC pharmacists worked within ACCHSs for 12-15 months implementing ten core roles. The qualitative evaluation obtained data on perceptions of the IPAC pharmacists, health service staff and patients of having an IPAC pharmacist, and from community pharmacists. It also explored project effectiveness including an in-depth assessment of implementation in an urban, regional and remote setting. Data informing these outcomes was collected through interviews with pharmacists, and online surveys with GPs, CEOs and managers, and community pharmacists. Site visits enabled stories and in-depth perspectives to be collected through interviews and focus groups with patients and health service staff. Observation provided opportunities to understand how the IPAC pharmacists worked within the participating ACCHSs.

Numerous benefits were reported. Benefits for health services staff included access to an in-house medicines expert for informal advice and medication reviews. IPAC pharmacists saved GPs time as they could answer their medication related queries quickly and also respond to queries from patients in place of the GP. Health services staff also benefited from the pharmacists having input into their clinical team meetings, providing education sessions, and their contribution to medicines safety and quality assurance activities by conducting drug utilisation reviews and assisting in developing and reviewing policies.

Benefits for patients from interactions with the pharmacist resulted in them *'feeling better'*. Patients were able to try alternative or different combinations of medications, or different regimes, suggested by the pharmacist. Patients reported that their biomedical test results had improved. Some patients had the pharmacist involved with them in consultations with the GP and were involved in decision-making. Patients felt empowered to better manage their health conditions and better understood why they needed to take their medications and how they worked. Patients also reported other benefits from changing medications such as losing weight, being motivated to do more exercise and engaging with other support groups and the community.

The IPAC pharmacist role was designed to be predominantly patient-centred and the majority of pharmacists enjoyed this aspect of the role. Pharmacists benefited through the role which provided them with new experiences resulting in personal and professional satisfaction in the service they were delivering. They developed meaningful relationships with patients and enjoyed the opportunity to have more patient contact.

The primary factor enabling the integration of the IPAC pharmacist role within ACCHSs was recruiting the right person for the role. It was important that the pharmacist had the right 'organizational fit' and personality for working in the ACCHS. In addition to possessing clinical skills, pharmacists needed to be culturally appropriate, able to develop relationships and build rapport and to be flexible, non-judgmental and resilient. They also needed to be confident and be proactive. Pharmacists with experience working in an ACCHS previously or a community setting settled into their roles more quickly. Possessing HMR accreditation was also an advantage in undertaking comprehensive medication reviews and resulted in financial benefits for ACCHSs. Support from ACCHSs included induction to the service, cultural induction to the community, access to the clinical information system, provision of a uniform, allocation of consulting space, promotion of the role and support from staff in particular Aboriginal Health Workers and GPs, and enabled the IPAC pharmacist to fulfil their role. Staff stability meant the IPAC pharmacist could develop relationships and understanding of their role with other staff, which resulted in patient referrals for their services.

Many ACCHSs already had strong existing relationships with their local community pharmacies and through the IPAC project these relationships were strengthened. The IPAC pharmacists worked together with community pharmacists to problem solve, access discharge summaries; confirm medication history, reconciliation and correcting errors, and facilitate supply of DAAs.

Challenges were experienced in implementing the IPAC pharmacist role and project within ACCHSs. While some services were prepared and managers reported having a good understanding of the project aims and the roles of IPAC pharmacists, just under half of the pharmacists felt their service wasn't ready. The pharmacists perceived there was a lack of understanding of the integrated pharmacist role. High turnover

of staff in the services, the absence of key personnel when they commenced, 'political chaos', and other priorities such as building new facilities were also cited as factors impacting upon the project.

Just under half of the pharmacists reported not receiving a local induction upon commencement. This meant that the pharmacist had not met key staff and were unfamiliar with local processes. For some sites communication about the project and the pharmacists' role was inadequate. Some IPAC pharmacists perceived that initially ACCHS staff didn't understand the role and didn't assist them settle in to working at the service. For the IPAC pharmacists who were supported by AHWs and AHPs rapport building and integration was easier. Staff turnover (and loss of project champions) also meant the pharmacists had to continually be proactive in educating staff about what they could do and which patients they should refer for the project. This limited the number of patient's recruited into the study. Some pharmacists didn't receive a local cultural induction, however support from Aboriginal health workers assisted with developing relationships within ACCHSs and with patients. At the time of the qualitative evaluation the majority of managers, GPs, other health services staff, and community and IPAC pharmacists overwhelmingly supported the integration of pharmacists within ACCHSs.

Without the support of GPs in particular, the IPAC pharmacists experienced difficulties in recruiting patients and conducting the project roles. Lack of professional trust in the pharmacist was initially an issue at a couple of sites. However, as the project progressed and the pharmacists' capabilities were recognised, professional relationships grew and trust developed. The project could have benefited from a lead-in period to provide time for the IPAC pharmacists to develop relationships with service staff and improve their understanding of the pharmacist's role.

The IPAC project's structured framework constrained the activities of some IPAC pharmacists, however others participated in activities they perceived out of the scope of the project to facilitate relationship building with health services staff and assist them integrate into the team. Other challenges in remote communities included the time it took for travel and reliable access to the internet and clinical information systems. A few of the IPAC pharmacists experienced challenges in balancing project work with their responsibilities in community pharmacy.

Overall, the qualitative evaluation of the IPAC project has demonstrated overwhelming support for a non-dispensing pharmacist to be integrated within the primary health care team of ACCHSs. The recommended number of days per week, or FTE that pharmacists should be employed in this type of position, depended on the size of the health service, the number of active patients within that service, the number of days GPs worked at the health service and remoteness. Flexibility would allow pharmacists to work during busy time-periods, participate in meetings and education, and potentially see patients opportunistically when they presented to the health service. Future models need to be flexible to meet the needs of the health service, especially in remote areas. Recommendations have been made to enhance future implementation and are detailed in the following section.

Summary of recommendations from qualitative evaluation participants

The following table summarises suggestions from participants in the qualitative evaluation on future policy and implementation of integrated pharmacists in ACCHSs.

Suggested actions for sector development	Owner and key partners	Potential pathways to implementation	Intended industry impacts
1. Support policy to integrate the role of a non-dispensing pharmacist within ACCHSs.	Federal Government	<p>1.1 Participants in the qualitative evaluation suggested options to support ACCHSs implement an ongoing integrated pharmacist model of care:</p> <p>1.1.1. Core services funding be increased to enable ACCHSs to implement the role.</p>	<p>Implementing this recommendation will lead to:</p> <ul style="list-style-type: none"> Enhance quality of care outcomes for Aboriginal and

Suggested actions for sector development	Owner and key partners	Potential pathways to implementation	Intended industry impacts
		<p>1.1.2. In remote settings explore increasing the section 100 pharmacy support allowance to fund integrated pharmacist time onsite within the clinic to deliver patient-related services.</p> <p>1.1.3. Consideration for other Federal Government sources of financial support for an integrated pharmacist within ACCHSs such as the creation of an MBS item for integrated pharmacist patient-related services (time based).</p> <p>1.2 Participants in the qualitative evaluation suggested that the cap on the number of funded HMRs should be removed to enable ACCHSs to facilitate as many HMRs as is needed by their patients. Current HMR Program Rules as defined by the Sixth Community Pharmacy Agreement limits HMRs which can be conducted by an accredited pharmacist to 20 per month.</p>	<p>Torres Strait Islander peoples with chronic disease</p> <ul style="list-style-type: none"> Continuity of care provided by pharmacists integrated into the team Improved prescribing quality Improved cost effectiveness Improved medication adherence
2. Advocacy and support to ACCHSs to facilitate processes for integrating pharmacists	NACCHO and Affiliates	<p>2.1 NACCHO and Affiliates support the development of processes and resources for pharmacists to be integrated in the primary health care teams of ACCHSs. Processes and resources should support ACCHS staff to be informed on the value of having a pharmacist in the team, to implement change management processes to introduce and embed the pharmacist and develop referral processes.</p> <p>2.2 Resources to guide preparation should consider the IMPACT Framework [1] and assist ACCHSs for the pharmacist role.</p> <p>2.3 ACCHSs that will be most ready to establish an integrated pharmacist role are those with systems established for quality improvement (eg. Referral, CIS).</p> <p>2.4 Develop the capacity of Aboriginal Health Workers/Practitioners and Outreach Workers to facilitate referral for patients needing support from the integrated pharmacist.</p>	<ul style="list-style-type: none"> ACCHSs are prepared for the pharmacist role All staff are aware of value and benefits of the role and facilitate integration into the primary health care team
3. Co-design of the pharmacist role with the ACCHS to ensure it meets their needs	NACCHO, ACCHSs and PSA	<p>3.1 Policy guiding the implementation of the pharmacist role should allow flexibility for ACCHSs to use the role to best meet the needs of the health service and promote self-determination.</p> <p>3.2 ACCHSs should be actively involved in the co-design of the integrated pharmacist role to ensure it suits their needs and seek support from NACCHO and their Affiliate where necessary.</p> <p>3.3 The recruitment of pharmacists to be integrated within ACCHSs should be flexible and be led by, ACCHSs so that pharmacists have the 'right organisational fit' and are skilled in key areas (character, clinical skills, communicator, collaborator and culturally responsive).</p>	<ul style="list-style-type: none"> Pharmacist services are tailored to the local ACCHS and meets patients' needs

Suggested actions for sector development	Owner and key partners	Potential pathways to implementation	Intended industry impacts
		3.4 Future projects to assess outcomes from integrated pharmacists within ACCHSs or alternate new models, need to allow a lead-in time to allow pharmacists to develop relationships with staff and patients and develop a deeper understanding of the local community and health service culture.	
4. Training and support to prepare pharmacists for a non-dispensing, integrated role within ACCHSs	PSA, NACCHO, and ACCHS, pharmacist training providers	<p>4.1 Support pharmacists to develop career pathways for integrated pharmacist roles. [2, 3]</p> <p>4.2 Prepare pharmacists for integrative roles within ACCHSs through the development of a training program that includes the conduct of medication reviews, working with internal and external stakeholders, team-based collaboration, patient counselling, preventive health care, transitional care arrangements, medication adherence assessment of Aboriginal and Torres Strait Islander patients, the provision of education and training and medicines information to staff and patients, and undertaking drug utilisation reviews. The program should also include comprehensive training on clinical information systems including all basic functionality, how to generate quality improvement reports and how to set up patient recalls.</p> <p>4.3 Ensure opportunities for pharmacists to undertake cultural safety training responsive to their place of practice prior to commencing activity within ACCHSs.</p> <p>4.4 ACCHSs to provide pharmacists with induction to the service and the local community including introduction to staff members in key roles and cultural orientation to the local population.</p> <p>4.5 Facilitate a community of practice network to enable knowledge sharing and peer support. Mentors can assist with clinical and/or cultural aspects of integrated practice and development of career pathways.</p>	<ul style="list-style-type: none"> Pharmacists and ACCHS staff are prepared and effectively deliver patient-centred care
5. Facilitate continuous improvement through further research and evaluation	Federal Government, Academic Institutions, NACCHO and affiliates, ACCHSs	<p>5.1 Funding should be made available for further research and evaluation of integrative pharmacist programs to facilitate continuous quality improvement.</p> <p>5.2 Research involving patients receiving services from pharmacists should use simplified information sheets and consent forms for patients and consider formal translation into local languages.</p> <p>5.3 Future research projects may consider the use of the pharmacist logbook in order to facilitate data collection about the activity of integrated pharmacists. Some design improvements to simplify data entry, and comprehensive training, are suggested.</p> <p>5.4 In the design of future research projects consider the time required for data entry and ensure this element is adequately factored into the allocation</p>	<ul style="list-style-type: none"> Improve evidence base and continuous improvement of role and service delivery

Suggested actions for sector development	Owner and key partners	Potential pathways to implementation	Intended industry impacts
		<p>of working hours.</p> <p>5.5 Mechanisms need to be established to support the continuation of trials, beyond the trial period, if they have been found to be successful. Short term projects have detrimental impact on Australian Aboriginal peoples and Torres Strait Islanders who have historically been over-researched, and on ACCHSs work processes.</p>	

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References

1. Northern Territory PHN and Northern Territory Government Top End Health Service. *IMPACT Framework - A Framework to Guide the Integration of Pharmacists into Primary Health Care Teams*. 2018 18 Dec 2018 25 February 2020]; Available from: https://www.ntphn.org.au/web_images/IMPACT%20Framework.pdf.
2. Pharmaceutical Society of Australia, *Guide to providing pharmacy services to Aboriginal and Torres Strait Islander people*. 2014: Canberra.
3. Pharmaceutical Society of Australia, *Pharmacists in 2023: Roles and remuneration*. 2019, PSA: Canberra.
4. Australia. Department of Families, Housing, Community Services and Indigenous Affairs. *Closing the gap: The need to act*. 2012 10 August 2012 [cited 2013 15 April 2013]; Available from: <http://www.dss.gov.au/our-responsibilities/indigenous-australians/programs-services/closing-the-gap/closing-the-gap-the-need-to-act>.
5. Close the Gap Steering Committee, *Close the gap: Progress and priorities report 2014*, The committee: Sydney.
6. Australian Institute of Health and Welfare, *Australia's health*, in *Australia's health series*, 12. 2010, AIHW: Canberra.
7. Australia. Department of the Prime Minister and Cabinet. *Closing the gap: Prime Minister's report 2014*. 2014; Available from: http://www.dpmc.gov.au/publications/docs/closing_the_gap_2014.pdf.
8. Australia. Department of Families, Housing, Community Services and Indigenous Affairs. *Closing the gap: Targets and building blocks*. 2012 10 August 2012 [cited 2013 15 April 2013]; Available from: <http://www.fahcsia.gov.au/our-responsibilities/indigenous-australians/programs-services/closing-the-gap/closing-the-gap-targets-and-building-blocks>.
9. World Health Organisation, *Adherence to long term therapies; evidence for action*. 2003, WHO: Geneva.
10. Cutler, R.L., et al., *Economic impact of medication non-adherence by disease groups: a systematic review*. *BMJ Open*, 2018. **8**(1): p. e016982.
11. Larkin, C. and R. Murray, *Assisting Aboriginal patients with medication management*. *Australian Prescriber*, 2005. **28**(5): p. 123-5.
12. de Dassel, J.L., A.P. Ralph, and A. Cass, *A systematic review of adherence in Indigenous Australians: an opportunity to improve chronic condition management*. *BMC Health Services Research*, 2017. **17**(1): p. 845.
13. Swain, L. and L. Barclay, *They've given me that many tablets, I'm bushed. I don't know where I'm going*. *Australian Journal of Rural Health*, 2013. **21**(4): p. 216-219.
14. Swain, L. and L. Barclay, *Medication reviews are useful, but the model needs to be changed: Perspectives of Aboriginal Health Service health professionals on Home Medicines Reviews*. *BMC Health Services Research*, 2015. **15**(1): p. 366.
15. Emden, C., et al., *Better medication management for Indigenous Australians: findings from the field*. *Australian Journal of Primary Health*, 2005. **11**(1): p. 80-90.
16. Australian Health Ministers' Advisory Council, *Aboriginal and Torres Strait Islander Health Performance Framework 2017 Report*. 2017: Canberra.
17. Eckerman, A., et al., *Binan goonj: Bridging cultures in Aboriginal health*. 3rd ed. 2010, Chatswood, Australia: Elsevier Australia.
18. Awofeso, N. *Racism: A major impediment to optimal Indigenous health and health care in Australia*. *Australian Indigenous Health Bulletin* 2011. **11**.
19. Osborne, K., F. Baum, and L. Brown, *What works? A review of actions addressing the social and economic determinants of Indigenous health*, in *Closing the Gap Clearing House*. 2013, Australian Institute of Health and Welfare and Australian Institute of Family Studies: Canberra.
20. Walshe, K. and J.A. Smith, *Healthcare Management*. 2nd ed. 2011, Maidenhead, England: Open University Press, McGraw-Hill Education.
21. Rosen, R., et al., *Integration in action: four international case studies*. 2011, Nuffield Trust: London.

22. NHS England and Health Education England, *Clinical Pharmacists in General Practice Pilot*. 2015, NHS England, Health Education England,.
23. Dolovich, L., et al., *Integrating Family Medicine and Pharmacy to Advance Primary Care Therapeutics*. Clinical Pharmacology & Therapeutics, 2008. **83**(6): p. 913-917.
24. Freeman, C., et al., *Integrating a pharmacist into the general practice environment: Opinions of pharmacists, general practitioners, health care consumers, and practice managers*. 2012: BMC Health Services Research. 12 (1) (no pagination), 2012. Article Number: 229. Date of Publication: 2012.
25. Tan, E.C.K., et al., *Integration of pharmacists into general practice clinics in Australia: the views of general practitioners and pharmacists*. International Journal of Pharmacy Practice, 2014. **22**(1): p. 28-37.
26. Australian Medical Association (AMA), *Pharmacists working within general practice – the way ahead*, in *AMA Family Doctor Week*. 2014.
27. United General Practice Australia, *Expanding pharmacists' role must link with general practice to achieve improved patient outcomes*. 2014.
28. Campbell Research & Consulting, *Home Medicines Review Program. Qualitative Research Project. Final Report*. . 2008, Department of Health & Ageing.
29. Swain, L., *Are rural and remote HMRs viable?* Australian Pharmacist, 2012. **3**: p. 184-185.
30. Swain, L., et al., *Attitudes of pharmacists to provision of Home Medicines Review for Indigenous Australians*. International Journal of Clinical Pharmacy, 2014. **36**(6): p. 1260-1267.
31. Farrell, B., et al., *Shifts in expectations: Evaluating physicians' perceptions as pharmacists become integrated into family practice*. Journal of Interprofessional Care, 2010. **24**(1): p. 80-89.
32. Freeman, C.R., et al., *An evaluation of medication review reports across different settings*. 2013: International Journal of Clinical Pharmacy. 35 (1) (pp 5-13), 2013. Date of Publication: February 2013.
33. Avery A, et al., *Investigating the prevalence and causes of prescribing errors in general practice: The PRACTICE Study (PRevalence And Causes of prescribng errors in general practiCe)*. . 2002, General Medical Council.
34. Avery AJ, et al., *PINCER trial: a cluster randomised trial comparing the effectiveness and cost-effectiveness of a pharmacist-led IT-based intervention with simple feedback in reducing rates of clinically important errors in medicines management in general practices*. 2010, Department of Health Patient Safety Research Portfolio.
35. Deloitte Access Economics, *Analysis of non-dispensing pharmacists in general practice clinics*. 2015, Australian Medical Association.
36. Hazen, A.C.M., et al., *The degree of integration of non-dispensing pharmacists in primary care practice and the impact on health outcomes: A systematic review*. Research in Social and Administrative Pharmacy, 2018. **14**(3): p. 228-240.
37. Wagner, E.H., et al., *Improving chronic illness care: translating evidence into action*. Health Aff (Millwood), 2001. **20**(6): p. 64-78.
38. Wagner, E.H., et al., *Quality improvement in chronic illness care: a collaborative approach*. Jt Comm J Qual Improv, 2001. **27**(2): p. 63-80.
39. McDonough, R. and W. Doucette, *Developing collaborative working relationships between pharmacists and physicians*. J Am Pharm Assoc, 2000. **41**: p. 682-692.
40. Barry, A.R. and R.T. Pammett, *Applying the guidelines for pharmacists integrating into primary care teams*. Canadian Pharmacists Journal / Revue des Pharmaciens du Canada, 2016. **149**(4): p. 219-225.
41. Bradley, F., et al., *The challenge of integrating community pharmacists into the primary health care team: A case study of local pharmaceutical services (LPS) pilots and interprofessional collaboration*. 2008: Journal of Interprofessional Care. 22 (4) (pp 387-398), 2008. Date of Publication: 2008.
42. Rao, S. and A. Presscot, *Maximising the potential of clinical pharmacists in general practice*. Guidelines in Practice, 2018. **21**(9): p. 38-42.
43. Dolovich, L., *Ontario pharmacists practicing in family health teams and the patient-centered medical home*. Annals of Pharmacotherapy, 2012. **46**(4): p. S33-9.

44. Kolodziejak, L., A. Rémillard, and S. Neubauer, *Integration of a primary healthcare pharmacist*. Journal of Interprofessional Care, 2010. **24**(3): p. 274-284.
45. Rao, S. and A. Presscot, *Clinical pharmacists: setting up for success*. Guidelines in Practice, 2018. **21**(8): p. 20-24.
46. Benson, H., et al., *Piloting the Integration of Non-Dispensing Pharmacists in the Australian General Practice Setting: A Process Evaluation*. International Journal of Integrated Care, 2018. **18**(2).
47. Benson, H., et al., *Pharmacists in general practice: recommendations resulting from team-based collaborative care*. Australian Journal of Primary Health, 2018. **24**(6): p. 448-454.
48. Jorgenson, D., et al., *Integrating pharmacists into primary care teams: barriers and facilitators*. International Journal of Pharmacy Practice, 2014. **22**(4): p. 292-299.
49. Tan, E.C.K., et al., *Pharmacist services provided in general practice clinics: A systematic review and meta-analysis*. 2014: Research in Social and Administrative Pharmacy. 10 (4) (pp 608-622), 2014. Date of Publication: July 2014.
50. Tan, E.C.K., et al., *Pharmacist consultations in general practice clinics: The Pharmacists in Practice Study (PIPS)*. 2014: Research in Social and Administrative Pharmacy. 10 (4) (pp 623-632), 2014. Date of Publication: July 2014.
51. Haua, R., J. Harrison, and T. Aspden, *Pharmacist integration into general practice in New Zealand*. 2019: Journal of Primary Health Care. 11 (2) (pp 159-169), 2019. Date of Publication: June 2019.
52. Kwint, H.-F., et al., *The Relationship between the Extent of Collaboration of General Practitioners and Pharmacists and the Implementation of Recommendations Arising from Medication Review*. Drugs & Aging, 2013. **30**(2): p. 91-102.
53. Deeks, L.S., et al., *Stakeholder perspectives about general practice pharmacists in the Australian Capital Territory: A qualitative pilot study*. 2018: Australian Journal of Primary Health. 24 (3) (pp 263-272), 2018. Date of Publication: 2018.
54. Campbell, C., R. Braund, and C. Morris, *Beyond the four walls: An exploratory survey of location, employment and roles of pharmacists in primary health care*. Journal of Primary Health Care, 2017. **9**(4): p. pp 297-310.
55. Castelli, G., et al., *Pharmacist-Delivered Comprehensive Medication Management Within Family Medicine Practices An Evaluation of the SCRIPT Project*. Family Medicine, 2018. **50**(8): p. 605-612.
56. Hayhoe, B., et al., *Impact of integrating pharmacists into primary care teams on health systems indicators: A systematic review*. 2019: British Journal of General Practice. 69 (687) (pp E665-E674), 2019. Date of Publication: 2019.
57. Pottie, K., et al., *Pharmacist's identity development within multidisciplinary primary health care teams in Ontario; qualitative results from the IMPACT (+) project*. 2009: Research in Social and Administrative Pharmacy. 5 (4) (pp 319-326), 2009. Date of Publication: December 2009.
58. Couzos, S., et al., *Integrating pharmacists into Aboriginal Community Controlled Health Services (IPAC Project): Protocol for an interventional, non-randomised study to improve chronic disease outcomes*. Research in Social and Administrative Pharmacy, In press.
59. Pui, S.S., et al., *A qualitative study on pharmacists' perception on integrating pharmacists into private general practitioner's clinics in Malaysia*. Pharmacy Practice (1886-3655), 2017. **15**(3): p. 1-9.
60. Nabhani-Gebara, S., et al., *General practice pharmacists in England: Integration, mediation and professional dynamics*. Research in Social and Administrative Pharmacy, 2019.
61. Johansen, J.S., et al., *Interdisciplinary collaboration across secondary and primary care to improve medication safety in the elderly (IMMENSE study): Study protocol for a randomised controlled trial*. 2018: BMJ Open. 8 (1) (no pagination), 2018. Article Number: e020106. Date of Publication: 01 Jan 2018.
62. Pottie, K., et al., *Integrating pharmacists into family practice teams: physicians' perspectives on collaborative care*. Canadian Family Physician, 2008. **54**(12): p. 1714-1717.e5.
63. Pui, S., et al., *Exploring the role of pharmacists in private primary healthcare clinics in Malaysia: The views of general practitioners*. 2017: Journal of Pharmacy Practice and Research. 47 (1) (pp 27-33), 2017. Date of Publication: 01 Feb 2017.

64. Australian Institute of Health and Welfare, *Contribution of chronic disease to the gap in adult mortality between Aboriginal and Torres Strait Islander and other Australians*. . 2010, AIHW: Canberra.
65. QSR International Pty Ltd, *NVivo qualitative data analysis software*. 2019.
66. Australian Government Department of Health. *Home Medicines Review*. 2018; Available from: <https://www.ppaonline.com.au/programs/medication-management-programs/home-medicines-review>
67. Australian Institute of Health and Welfare. *Remoteness classification (ASGS-RA) N*. . 2013 24/09/18].
68. Australian Government Department of Health. *Modified Monash Model*. 2015 24/09/18.].
69. Pharmaceutical Society of Australia, *IPAC project pharmacist recruitment report*. 2020.
70. James Cook University, *Non-patient-related activity data report (unpublished report)*. 2020.

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Appendices

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