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Pharmacy Programs Cost Effectiveness Review
Final Report – Health/ E24-251563

June 2025

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Project Background

Background

Community Pharmacy Agreements (CPA) between the Commonwealth and the Pharmacy Guild of Australia have been in place since 1990 (with the Pharmaceutical Society of Australia (PSA) introduced as a co-signatory in the 7CPA) with their key purpose being to provide for the timely and equitable supply of PBS medicines across Australia. Each of the eight agreements to date has built upon its predecessor while incorporating key updates.

With the commencement of the latest, 8CPA on 1 July 2024, 17 Programs previously funded by the 7CPA were separated to retain more flexible management and review. To support improved Program efficiency and negotiation with the PSA on the management of these Programs, the Commonwealth Department of Health, Disability and Ageing (the Department) have engaged Deloitte to review and identify the cost-effectiveness of the Programs previously funded under the 7CPA.

Project Purpose

This intent of report was to identify whether each of the 17 in-scope Programs previously funded by the 7CPA are effective and cost-effective and to consider their impact on the pharmacy sector and health systems more broadly.

Project Methodology

The project sourced information from both quantitative and qualitative sources (refer to Figure ES.1). Data was derived through a desktop review of strategic policy documents and scientific literature, cost and outcome data from the Pharmacy Programs Administrator (PPA), and consultations with representatives from the Department, the in-scope Programs, and industry Peak Bodies. Findings were synthesised to produce insights into the cost-effectiveness, appropriateness, effectiveness and efficiency of each in-scope Program.

Figure ES.1: Project methodology

1 Planning	2 Data Collection	3 Program and Cost Effectiveness Analysis	4 Reporting and Handover
Development of a Project Plan to guide the review.	Collection of quantitative and qualitative data through Programs data, literature scan and stakeholder consultations with 83 stakeholders.	Combination of descriptive, thematic and cost-effectiveness analyses to understand the cost-effectiveness, appropriateness, effectiveness and efficiency of Programs.	Synthesis of data across all sources and areas of analysis summarised in the Final Report (this document).

Limitations

There are several limitations in this report that should be understood when interpreting the results and making decisions relating to the allocation of funding across each Program. Limitations pertain to variability in availability

of data for expenditure, outputs and outcomes across Programs. Due to the limited availability of output data and resulting uncertainty surrounding calculations, the analysis was not able to account for any downstream health system or economic benefits from the Programs.

Key Findings

The Review grouped the 17 pharmacy Programs into three areas based on targeted outcomes. The findings for each of these outcome areas are detailed below.

Medication Management Programs

Home Medicine Review (HMR), Home Medicines Review Rural Loading Allowance (HMR-RLA), Residential Medication Management Review (RMMR) Program, Quality Use of Medicines (QUM) Program.

These Programs were effectively delivered to consumers living in the community and residents in aged care facilities to support their medication management and quality use of medicine. For each of the HMR and RMMR Programs, a significant number of changes to consumer and resident medicines were reported by stakeholders which was perceived to support improved quality of life and reduce adverse event. On average, 1.8 recommendations were provided for each HMR at a cost of $133 per pharmacist recommendation. A lack of granular data limits a precise assessment of these Programs' cost-effectiveness. However, using published literature to estimate the upper and lower bounds of General Practitioner acceptance of pharmacist recommendations, the HMR Program has costed between $159 to $297 per accepted recommendation and $2,164 to $4,039 per potential avoided adverse drug event.

Equivalent data on the number of recommendations provided was unavailable for the RMMR Program, however between July 2020 and December 2024, RMMR facilitated approximately 520,000 reviews (on average 116,301 per year) for a total cost of $66 million. This suggests that approximately 60% of aged care residents in Australia were reviewed each year on average. This is a substantial proportion of the population which was perceived by stakeholders to support improvements in medication management within the sector.

Complementing the RMMR Program, the QUM Program aimed to improve quality use of medicine within aged care facilities. Stakeholders reported that the Program was successful in delivering its planned activities. However, it relied on an individual pharmacist to deliver services that met the needs of the facility whereas sometimes the facility had to accept the support that the pharmacist was offering. For example, a facility required advisory support, however, the pharmacist was only able to provide support developing policy and procedures. This highlighted the importance of developing relationships with pharmacists providing the QUM Program to ensure that facility needs were being met.

Stakeholders highlighted several opportunities to improve the efficiency of Programs which included:
- scaled funding to better support consumers with complex needs and those within rural and remote locations,
- standardised reporting templates to improve consistency in care,
- team-based care, particularly in rural areas, to enhance care coordination.

Aboriginal and Torres Strait Islander Specific Programs

Indigenous Health Services Pharmacy Support (IHSPS) Program, Aboriginal and Torres Strait Islander Pharmacy Scholarship Scheme (ATSIPSS), Aboriginal and Torres Strait Islander Pharmacy Assistant Traineeship Scheme (ATSIPATS).

These Programs focus on increasing Aboriginal and Torres Strait Islander participation in the pharmacy workforce and improving service delivery through Indigenous Health Services (IHSs). The IHSPS was highlighted as a flexible Program that could be tailored to individual IHSs to better meet the unique needs of the community.

The IHSPS cost on average $8,260 per activity delivered; activities included direct pharmacist support, QUM devices, QUM education activities and direct patient transport activities.

Despite the perceived success of the IHSPS, the ATSIPSS and ATSIPATS Programs were reportedly underutilised (noting that no targets were set), supporting ~7 students per year and ~5 trainees per year, respectively. This was reportedly due to:

- low awareness of the Programs and their ability to support Aboriginal and Torres Strait Islanders enter the pharmacy workforce,
- limited integration of the Programs into a broader set of strategies that aim to improve the number of Aboriginal and Torres Strait Islanders into the health care workforce.

Stakeholders highlighted that the Programs could be improved if administered through Aboriginal and Torres Strait Islander specific organisations to ensure cultural safety, engagement and overall effectiveness. It was also noted that the Programs could be improved by strengthening reporting and leveraging complementary models of care that integrated pharmacists into Aboriginal Community Control Health Organisations.

Rural Support Programs

Emergency Locum Service (ELS), Intern Incentive Allowance for Rural Pharmacies (IIARP), Intern Incentive Allowance for Rural Pharmacies - Extension Program (IIARP-EP), Rural Intern Training Allowance (RITA), Rural Pharmacy Scholarship Scheme (RPSS), Rural Pharmacy Scholarship Mentor Scheme (RPSS-Mentor), Rural Pharmacy Student Placement Allowance (Allowance) and Administrative Support to Pharmacy Schools Scheme (Admin Support), Rural Pharmacy Liaison Officer Program (RPLO), Continuing Professional Education (CPE) Program.

These Programs aim to bolster the rural pharmacy workforce and improve access to pharmacy services in rural areas through increased workforce. More than half of the funding (59%) available for these Programs went towards student scholarships or student pharmacy placements, with the intention that these students will choose to work in a rural setting in the future. The remaining 41% went toward immediate or short-term workforce relief, providing support by placing locums and pharmacy interns in full-time positions in a rural setting.

It is unclear the extent to which these Programs resulted in improved retention and recruitment due to limited outcomes data, however, published literature indicates positive impacts on rural workforce retention when funding is available. Despite the lack of outcomes data, stakeholders highlighted the importance of these Programs in exposing students to rural workforce Programs. They noted that the limited funding available, compared to other Programs, hampers the Programs ability to make a significant difference when accompanied with significant rurality and low awareness.

Stakeholders suggested that integrating these Programs into a broader rural workforce strategy, focusing on long-term skill development and retention and streamlining funding access to combine similar Programs could enhance administrative efficiencies and improve outcomes.

Recommendations

The 17 Pharmacy Programs provide critical support to the targeted demographics of consumers, residents, pharmacists, students or First Nations community members. Stakeholders perceived that the Programs support:

- the quality use of medicines,
- assist with minimising adverse drug events,
- provide culturally appropriate services for Aboriginal and Torres Strait Islander people,
- access to PBS medicines and pharmacy services for people living in rural and remote regions of Australia.

Despite the success that is detailed in this report, the continuation of a business-as-usual approach to the administration of these Programs is not considered a feasible approach for the Department. This is primarily due to the limited outcome data captured across most Programs - an issue that has been detailed in previous evaluations and reviews. This impacts the ability of the Department to assess performance and ultimately ensure that Australian taxpayers are receiving value for money.

As such, Table ES.1 provides a suite of recommendations for further consideration, noting that it leverages both the detailed data analysis undertaken and opportunities identified by stakeholders throughout consultation.

Table ES.1: Recommendations for consideration by the Department

	Recommendations
1	The Department should strongly consider the establishment of a Monitoring and Evaluation Plan (M&E Plan) that contains a minimum set of agreed outcome indicators to assess Program effectiveness. This should be accompanied by relevant processes, tools and mechanisms to collect the requisite data for enacting the M&E Plan.
2	The Department could explore opportunities to scale funding for Programs based on complexity, time, and location to ensure that remuneration is commensurate with delivery expectations and ensure that pharmacists are incentivised to provide services to rural communities and complex patients. This would also negate the need for the additional rural allowances that are provided within the current Program rules.
3	The Department could consider removing the cap on the number of HMRs a credentialed pharmacist can complete to ensure that consumers have equitable access whilst also move to a regulatory approach that assesses quality through quality audits / prescriber engagement on utility of developed reports.
4	The Department could consider developing a Pharmacy Workforce Strategy to support a consistent and targeted approach to supporting the development of the pharmacy workforce.
5	The Department, in partnership with the PSA and with the support of NACCHO, could consider the implementation of an awareness initiative to ensure that eligible participants, including pharmacists and consumers, are aware of the Programs. In particular, focus should begin on Aboriginal and Torres Strait Islander Specific and Rural Support Programs.
6	The Department could consider opportunities to modernise the existing Program rules to promote flexibility in Program delivery that recognises changes in delivery models available to pharmacists. This might include expansion of eligible referring clinicians to capture acute and community settings, incorporation of telehealth to support access, and revision of eligibility criteria to better target populations in need.
7	The Department could consider opportunities to improve the transparency of Program utilisation and success via building a reporting dashboard (or similar) for public access. This could be managed and updated by the PPA.
8	The Department could consider which entity is best placed to administer the Programs targeted at Aboriginal and Torres Strait Islander pharmacists/community members to ensure cultural safety and centralised approach to support.

Background and Approach.

1   Background

1.1   Background

Community pharmacy and pharmacists play an integral role in primary health care in Australia, through the provision of Pharmaceutical Benefits Scheme (PBS) medicines and related professional pharmacy services to the community. Most Australians prefer community pharmacies as their primary access point for various medicines and healthcare products, including prescription medicines (such as those provided through the PBS) and over-the-counter medicines.

Community pharmacies are considered the most accessible of healthcare destinations, with 96% of people in capital cities and 74% of people in the rest of the country living within 2.5km of a pharmacy.[1] This extensive and vast network enables broad access to other important government-funded medicine related services including dose administration aids, diabetes care, medication reviews, and expert advice on the safe and effective use of medicines.

1.2   Community Pharmacy Agreements

Community Pharmacy Agreements (CPA) between the Commonwealth and the Pharmacy Guild of Australia have been in place since 1990 (with the Pharmaceutical Society of Australia (PSA) introduced as a co-signatory in the Seventh Community Pharmacy Agreement (7CPA) with their key purpose being to provide timely and equitable supply of PBS medicines across Australia. Each of the eight agreements to date has built upon its predecessor while incorporating key updates.

The agreements aim to support the central pillars of the National Medicines Policy pictured in Figure 1.1.[2]

Figure 1.1: National Medicines Policy Central Pillars[2]

With the commencement of the latest, 8CPA on 1 July 2024, 17 Programs previously funded by the 7CPA were separated to retain more flexible management and review. As a result, the Department of Health and Aged Care (the Department) has engaged Deloitte to review the cost effectiveness of the 17 pharmacy Programs previously funded under the 7CPA.

Specifically, the review aims to understand:

- How effective are each of the 17 Programs in achieving their intended purpose as per the Program rules?

- What are the barriers and enablers to accessing the Programs?

- How cost effective are each of the 17 Programs?

- Are there other existing government initiatives which address or could address the same purpose more effectively and/or efficiently?

- What are the suggestions from the stakeholders to improve these Programs?

- What changes could Government consider to make the Programs more cost effective?

This report will identify whether each of the 17 in scope Programs previously funded by the 7CPA are appropriate, effective, efficient and cost-effective and will consider their impact on the pharmacy sector and health systems more broadly.

2 Approach

2.1 Planning

During the project inception phase, a Project Plan was developed with the Department. The Project Plan established the Program approach, timeline and deliverables. This first phase also included the development and submission of a data request for de-identified PPA data, the creation of an analytical framework to guide our modelling approach (see Appendix A), and the generation of a stakeholder engagement plan with targeted consultation guides for each group of stakeholders.

2.2 Data Collection

Following the planning phase, data collection occurred using a mixed-methods approach and drew on a range of primary qualitative and quantitative data, as well as secondary data sources. The section below provides an overview of these data sources:

- **De-Identified Program Data.** Through a data request submitted to the Department, de-identified Program data collected by the Pharmacy Programs Administrator (PPA) was accessed for all in-scope Programs. The availability of data varied with most Programs having expenditure and total claims, with further specificity being varied, for instance some Programs contained data by consumer or provider MM (Modified Monash) category.

- **Stakeholder Consultations.** 22 consultations were conducted with 83 stakeholders (refer to Appendix B for the full list of stakeholders) to inform a qualitative understanding of the appropriateness, effectiveness and efficiency of the Programs. The consultations were also used to gather anecdotal evidence for Program outcomes where PPA data was unavailable.

- **Literature Scan.** Documents pertaining to Program rules, relevant trials, medication management and rural workforce were reviewed to inform contextual understanding of the Programs, and to understand the appropriateness, effectiveness, efficiency, and cost-effectiveness of the Programs where possible. Refer to Appendix C for a list of documents reviewed.

2.3 Data Analysis

Descriptive analyses were undertaken where possible for de-identified Program data to calculate frequency, proportions and relevant measures of central tendency. Data sourced through stakeholder consultations and the literature scan were thematically analysed to identify common themes. Finally, quantitative and qualitative findings were triangulated and synthesised to understand the appropriateness, effectiveness and efficiency of the Programs.

2.4 Reporting and Handover

The findings were synthesised across all data sources and areas of analysis and summarised in the Final Report (this document). In response to the key questions, aim and objectives detailed in the Order for Services, this report culminates with a series of recommendations for the Department to consider to support the Programs to achieve the desired outcomes.

2.5 Cost-effectiveness analysis

Cost-effectiveness analysis is an economic evaluation method that compares the costs of a Program with its effectiveness in achieving its intended outcomes. It is commonly used in health care and public policy to assess the value for money of different interventions, either by comparing two or more effective Programs or by evaluating the cost required for a single Program to achieve its intended outcomes (Figure 2.1).

Unlike cost-benefit analysis, which expresses all costs and benefits in monetary terms and produces a cost-to-benefit ratio in dollars, cost-effectiveness is measured in natural units that are relevant to the outcome of interest. In the case of the 7CPA, effectiveness could be measured by the increase in pharmacy FTE, hospitalisations avoided, years of life saved, quality-adjusted life years (QALYs) gained, or disability adjusted life years (DALYs) gained.

Throughout this analysis, the base case assumes that the 17 in-scope Programs were not delivered from July 2020 to December 2024 and that no comparable interventions were delivered in their place.

Due to data limitations, the ability to analyse and model outcomes for the Programs was limited. Cost-effectiveness measures were based on output measures where it was not feasible to model outcomes, such as number of activities delivered or temporary positions supported. An exception was the Medication Management Programs, where available data allowed for an approximation of hospitalisations avoided and deaths avoided. Given the data limitations and also differences in objectives across Programs, it was not possible to produce equivalent cost-effectiveness ratios across the Programs.

Figure 2.1: High level cost-effectiveness analysis framework
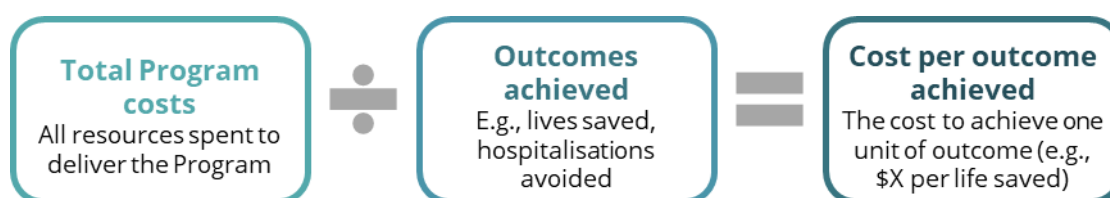
2.6   Limitations and considerations

There are several limitations in this report that should be understood when interpreting the results and making decisions relating to the allocation of funding across each Program.

Data availability

- **Expenditure:** Data on total Program expenditure was provided for all Programs except for HMR-RLA, where costs were included within the HMR total. However, only Program level expenditure data over time was provided, preventing analysis by specific cost areas (e.g., labour, capital, administration).

- **Outputs:** For RPLO and Admin support, no data on outputs was collected. For HMR-RLA, while number of reviews was collected, expenditure was included within the HMR total. As a result, cost per output could not be reported for RPLO, Admin Support or HMR-RLA. For the remaining Programs, total expenditure and number of outputs (reviews, activities or positions funded) was provided, allowing cost per output to be calculated.

Excluding RITA and RPSPA, no granular regionality data was reported. For the Rural Support Programs, this meant that outputs could not be analysed by remoteness.

- **Outcomes:**

    o For HMR, data was collected on review outcomes, including observations and recommendations, allowing estimation of avoided ADEs and hospitalisations. For RMMR, no Program-wide data was collected. For both Programs, data on the number and type of medicines deprescribed was unavailable, so PBS savings could not be calculated.

    o For QUM, RITA, CPE and IHSPS, no data was collected on the potential improvements in practices resulting from the activities delivered.

- For ELS, IIARP, IIARP-EP, RPSS, RPSS-Mentor, and RPSPA, no outcomes data was provided, such as whether participants enabled a pharmacy to better meet demand or avoid closure, or how many went on to work in rural areas.

- For ATSIPSS and ATSIPATS, no data was collected on the number of participants who went on to enter the pharmacy workforce.

- **Geography:**

    - Excluding RITA and RPSPA, no granular regionality data was reported. For the Rural Support Programs, this meant that outputs could not be analysed by remoteness.

Scope

Due to the limited availability of output data and resulting uncertainty surrounding calculations, the analysis does not account for any downstream health system or economic benefits from the Programs. For example, while a reduction in adverse drug events is expected to generate productivity gains, the available data do not allow for a sufficiently precise estimate of this reduction to support further quantitative analysis.

Findings.

3   Structure of this Section

3.1   Section Overview

This chapter provides a detailed overview of the findings arising from the Review. The chapter has been segmented into three components, based on the groupings of the 17 in-scope community pharmacy Programs:

    i.   Medication Management Programs,

    ii.   Rural Support Programs,

    iii.   Aboriginal and Torres Strait Islander Specific Programs.

Programs have been grouped based on similarities in their intended outcomes. Refer to Table 3.1 for a detailed description of each Program/overarching group.

3.2   Discussion Structure

For each Program group, a discussion of the following has been provided:

- Summary of Key Findings and Cost-effectiveness,

- Detailed breakdown of Key Findings and analysis.

Where possible, findings have been discussed at the individual Program-level throughout this section.

3.3   In-scope Programs

A list of in-scope Programs and their description and key outcomes are provided in Table 3.1.

Table 3.1: List of in-scope Programs

Program name	Description	Key outcome of Program
Medication Management Programs		
Home Medicines Review (HMR)	Support the quality use of medicines and assist minimising adverse drug events by helping people to better understand and manage their medicines through a medication review conducted by a credentialed pharmacist in the home. In the HMR Interview process, the credentialed pharmacist aims to improve the consumer's understanding of their medicines.	Enhance the QUM Reduce the number of adverse events
Home Medicines Review Rural Loading Allowance (HMR-RLA)	Facilitates access to HMR services for consumers who live in rural or remote areas. During the provision of a HMR service, the credentialed pharmacist may have to travel significant distances to conduct the HMR Interview(s) in the consumer's home.	
Residential Medication Management Review (RMMR) Program	Support the QUM and assist minimising adverse drug events for people living in approved Australian Government-funded Aged Care Facilities through medication reviews conducted by credentialed pharmacist in the aged care facility.	Reduce the number of adverse drug events

Quality Use of Medicines (QUM) Program	Supports the delivery of services and activities by pharmacists aimed at supporting the quality use of medicines, including the safe use of medicines, within Australian Government-funded Aged Care Facilities.	Improve procedures and practices related to QUM within Australian Government-funded Facilities.
Aboriginal and Torres Strait Islander Specific Programs		
Indigenous Health Services Pharmacy Support (IHSPS) Program	Supports services provided by Indigenous Health Services (IHSs) and Service Providers that contribute to the improvement of QUM and health outcomes for Aboriginal and Torres Strait Islander (ATSI) people. The Program includes four categories: QUM Pharmacy Support, QUM Devices, QUM Education and Patient Transport.	Improve health outcomes for Aboriginal and Torres Strait Islander people
Aboriginal and Torres Strait Islander Pharmacy Scholarship Scheme (ATSIPSS)	Encourage Aboriginal and Torres Strait Islander students to undertake undergraduate or graduate entry studies in pharmacy at an Australian university, to address the health needs of the Aboriginal and Torres Strait Islander community and the workforce needs of the pharmacy profession.	Increase Aboriginal and Torres Strait Islander participation in the pharmacy workforce
Aboriginal and Torres Strait Islander Pharmacy Assistant Traineeship Scheme (ATSIPATS)	Increase Aboriginal and Torres Strait Islander participation in the pharmacy workforce to assist pharmacies to better meet the needs of their local communities. The scheme provides allowance payments to eligible pharmacies that employ and support Aboriginal and/or Torres Strait Islander Pharmacy Assistants to complete a nationally accredited Pharmacy Assistant training course.	Increase Aboriginal and Torres Strait Islander participation in the pharmacy workforce
Rural Support Programs		
Emergency Locum Service (ELS)	Support pharmacy owners in rural and remote areas through direct access to pharmacist locums in emergency situations such as illness, bereavement, or family emergencies. The service aims to place a locum in any location in Australia within 24 hours, for a maximum of seven days.	Increase and retain workforce participation in areas of need (rural and remote regions)
Intern Incentive Allowance for Rural Pharmacies (IIARP)	Provision of incentive payments to pharmacy owners or eligible hospital authorities offering a placement for a pharmacy graduate during their intern year in a rural or remote pharmacy.	Increase and retain workforce participation in areas of need (rural and remote regions)
Intern Incentive Allowance for Rural Pharmacies - Extension Program (IIARP-EP)	Provision of funding to community pharmacies located in rural and remote communities in order to retain newly registered pharmacists beyond their internship training year.	Enhance workforce skills and capability in areas of need (rural and remote regions)
Rural Intern Training Allowance (RITA)	Provision of financial support for pharmacy Interns practicing in rural and remote areas to access compulsory training activities required as part of their Intern Training Program.	
Rural Pharmacy Scholarship Scheme (RPSS)	Provision of financial support to students from rural and remote communities to undertake undergraduate or postgraduate studies in pharmacy at university. Scholarship holders are encouraged to seek employment in rural and remote areas following graduation.	
Rural Pharmacy Scholarship Mentor	This scheme supplements the Rural Pharmacy Scholarship Scheme and the Aboriginal and Torres Strait Islander Pharmacy Scholarship Scheme by strengthening the scholar's ties to rural and regional	Increase Aboriginal and Torres Strait Islander

Scheme (RPSS-Mentor)	Australia and providing support to scholars outside of the university and formal study environment.	participation in the pharmacy workforce. Increase workforce participation in areas of need (rural and remote regions)
Rural Pharmacy Student Placement Allowance (Allowance) and Administrative Support to Pharmacy Schools Scheme (Admin Support)	Provision of financial support to Australian universities to facilitate pharmacy student placements in rural and remote communities. The Allowance assists with students' travel and accommodation costs for participating in placements in rural and remote areas. Pharmacy Schools receive support for administration of rural and remote placement Programs via the Administrative Support to Pharmacy Schools Scheme.	Increase and retain workforce participation in areas of need (rural and remote regions) Enhance workforce skills and capability in areas of need (rural and remote regions)
Rural Pharmacy Liaison Officer Program (RPLO)	Support pharmacists and pharmacy students practicing in rural and remote areas and to deliver local Programs that support clinical placements and promote intra-professional collaboration and support. These local Programs facilitate professional development and networking opportunities between pharmacies, pharmacy departments, pharmacists, pharmacy students, and university pharmacy schools.	Enhance workforce skills and capability in areas of need (rural and remote regions)
Continuing Professional Education (CPE)	Supports pharmacists from rural and remote areas to access Continuing Professional Development (CPD) activities by providing financial support for travel and accommodation. The Program also provides funding for professional educators to travel to a rural location to deliver CPD activities.	Enhance workforce skills and capability in areas of need (rural and remote regions)

4 Medication Management Programs

4.1 Key Findings

Key findings for Medication Management Programs

1. The Medication Management Programs were effectively delivered to consumers at home and residents and staff in aged care facilities. Specifically, the Programs achieved the following outcomes:

- HMR (including HMR-RLA) – Delivered 467,272 reviews from July 2020 to December 2024, averaging 1.8 recommendations per review.
- RMMR – Delivered 523,354 reviews from July 2020 to December 2024,
- QUM – Delivery of education and training sessions to improve medication management in aged care facilities.

2. Stakeholders reported the HMR and RMMR Programs were most effective when conducted by pharmacists with a pre-existing relationship with the consumer, providing them with a comprehensive understanding of their medical history and likely ongoing contact with the consumer's General Practitioner (GP).

3. Stakeholders reported that the HMR and the HMR-RLA Program lacked scaled funding matched to complexity, rurality and/or effort/time required to deliver them.

4. Stakeholders suggested efficiency gains could be made across the Programs by revising Program rules with suggestions that included:

- Regulating the service provision of HMRs by quality standards rather than through capped service delivery to ensure consumers could access the service,
- Embedding pharmacists within multi-disciplinary teams to maximise team-based care,
- Standardising HMR and RMMR reporting processes to drive national consistency.

Key output measures

From July 2020 to December 2024:

- HMR delivered 467,000 reviews in total (~93,000 reviews per year) for a total investment of $111m,
- HMR-RLA supported the delivery of 0.9% (4,098 of 478,000) of HMRs. Expenditure was not reported separately and was instead included in the HMR total,
- RMMR delivered 523,000 reviews in total (~116,000 reviews per year) for a total investment of $66m,
- QUM delivered 273,000 activities, including advising on current practices (44%), education (29%), audit and evaluation (26%) and developing policy and procedure (17%) for a total investment of $43m.

4.2   Cost-effectiveness analysis

The Medication Management Programs (including HMR and RMMR) are intended to deliver a number of key outcomes which could be used to determine the cost-effectiveness of the Programs. This includes:

- Increased medication literacy and compliance,

- Avoided adverse drug events and associated hospitalisations / deaths,

- Improved overall health quality of life due to more effective medication regimens,

- Increased productivity associated with increased health, and

- Reduced or more optimised PBS expenditure and allocation.

However, relevant and appropriate data is required to assess the impact of the Programs on these outcomes. For example, understanding the impact on quality of life would require data that enables the comparison of quality of life for people who received reviews with people who did not. Alternatively, primary data sources such as surveys or follow-ups of participants could also be used to track such outcomes.

In considering this analysis, it is important to note that limited outcome data was collected for HMR. Specifically, no data were collected at the Program level on the impact of reviews on patient medication literacy or compliance, the extent to which recommendations were accepted, specific details of recommended medicine changes, or the nature and severity of potential adverse drug events. As a result, only the number and cost of potential avoided adverse drug events could be approximated, with the figures being largely indicative in nature.

For RMMR, no data beyond the number of reviews undertaken was provided. As a result, only cost per review could be calculated.

Table 4.1 shows data that could be used to measure cost-effectiveness of HMR and RMMR against data that was available for the current review. Notably, the data available to support this review only allowed analysis of the cost per review accepted and other discrete measures such as hospitalisations avoided.

Table 4.1: Outcomes and required data sources for Medication Management Programs

Outcome	Required data sources	Current availability by Program	
		HMR	RMMR
Changes to medication regimen	No. of reviews undertaken	✓	✓
	No. of recommendations accepted (including whether fully or partially accepted)	✗	✗
Avoided adverse drug events	No. of adverse drug events for participants and non-participants	✓	✗
Avoided hospitalisations	No. of hospitalisations for participants and non-participants	✗	✗
Avoided deaths	No. of deaths for participants and non-participants	✗	✗

Improved health and quality of life	Reported health quality of life for participants and non-participants	✕	✕
	No. of disabilities resulting from adverse drug events for participants and non-participants	✕	✕
Increased productivity	Reported employment rate for participants and non-participants	✕	✕
	Reported absenteeism and presenteeism for participants and non-participants	✕	✕
Reduced or more optimised PBS expenditure and allocation	Nature and urgency of recommendations made (i.e., change in dose, prescription of new medicine)	✓	✕
	Cost to PBS for existing and new medication regimens	✕	✕

✓ Available   ✓ Partially/Proxy Available   ✕ Unavailable

For most of the Medication Management Programs, the number of reviews or activities funded and the total expenditure were collected. Table 4.2 shows the resulting cost-per-output ratios. For HMR (including HMR-RLA) and RMMR, these can be interpreted as the cost per review funded, and for QUM, as the cost per activity funded. RMMR delivered medication reviews at a lower unit cost relative to HMR, which also included costs for HMR-RLA. For all three Programs, the cost-per-output ratios appear to increase initially until approximately 2022, before stabilising.

Table 4.2: Cost-per-output ratios for Rural Support Programs, July 2020 to December 2024

	2020	2021	2022	2023	2024	Total
HMR (including HMR-RLA)^	$211	$204	$261	$250	$251	$240
RMMR^	$111	$114	$130	$131	$135	$126
QUM+	$75	$90	$214	$203	$197	$159

^cost-per-output ratio calculated for number of reviews funded
+cost-per-output ratio calculated for number of activities funded.

Number of recommendations

As part of HMR, data was collected on the number and nature of recommendations that resulted from each review conducted. In total, 467,272 reviews were conducted through HMR between July 2020 and December 2024, resulting in 837,713 recommendations. When considering the total Program cost of $111,814,942, this results in a cost per pharmacist recommendation of $133.

Number of accepted recommendations

Approximately 80% (371,962 of 467,272) of reviews resulted in at least one recommended medication change, with the remaining 20% (95,310 of 467,272) resulting in another recommendation that may not involve any medication change. Stakeholder consultations revealed that of the reviews that resulted in a recommended medication change, not all recommendations were accepted by GPs. While data for the number of recommendations accepted by GPs was not available, evidence from the literature suggests that in the residential aged care context, between 45% and 84% of pharmacist recommendations to resolve medicine related problems are accepted by GPs.[3] For the purposes of indicative analysis, these values can be considered lower and upper bounds for the recommendation acceptance rate in the HMR context. The resulting number of accepted recommendations and cost per accepted recommendation are displayed in Table 4.3.

Table 4.3: Estimated acceptance of HMR recommendations, potential avoided adverse drug events and associated costs under lower and upper bound estimates for GP recommendation acceptance rate

	Acceptance rate	
	Lower bound (45%)	Upper bound (84%)
No. of accepted HMR recommendations	376,971	703,678
Program cost per accepted HMR recommendation	$297	$159
No. of potential avoided adverse drug events	27,684	51,677
Program cost per potential avoided adverse drug event	$4,039	$2,164

Adverse drug events

For HMR, further data was collected on whether pharmacist recommendations may have prevented an adverse drug event. In total, 61,520 HMR reviews identified a suspected potential adverse drug event from July 2020 to December 2024. Using the lower and upper bounds for GP acceptance rate, the resulting number of potential avoided adverse drug events and program cost per potential avoided adverse drug event are shown in Table 4.3.

Other potential benefits

While research has established a link between adverse drug events and hospitalisation, with one study reporting that 3.8% of ADEs identified in primary care led to emergency hospital admissions, the evidence specific to HMRs on these and other downstream outcomes remains limited and inconclusive.[4] A comprehensive review conducted in 2016 as part of the evaluation of the Sixth Community Pharmacy Agreement (6CPA) found mixed results regarding the effectiveness of HMRs.[5] More recent literature continues to report similarly inconclusive findings on their impact on unplanned hospitalisations, falls, entry into residential aged care, and mortality.[6]

Without any information on the specific number and nature of adverse drug events avoided through participation in HMR, and their resulting downstream impact on hospitalisation, disability and death, it is therefore not possible to quantify these benefits.

4.3   Program delivery
HMR and HMR-RLA

Between July 2020 and December 2024, HMR facilitated 478,691 reviews (Table 4.4) for a total cost of $111 million. Chart 4.1. outlines the number of HMR reviews as a proportion of Australians who use PBS medicine, from 2020 to 2024. If it's assumed that each review relates to one individual, with each individual receiving exactly one review each year, this would suggest approximately 13% of all PBS users in Australia

received a HMR, with the proportion increasing overtime. Note however, that the same individuals may not receive a review every year, and thus the number of individuals receiving reviews over time likely represents more than 13% of all PBS users.

Table 4.4: Reviews funded by Medication Management Programs, July 2020 to December 2024

Program	Total reviews	Average reviews per year	Total Program expenditure
HMR	478,691	95,738	$111,814,942
HMR-RLA	4,089	818	Included in HMR total
RMMR	523,354	116,301	$66,016,036

Note: All reviews completed through HMR-RLA are also counted under HMR. HMR-RLA expenditure is also included within the HMR total expenditure.

Chart 4.1: Number of HMR reviews as a proportion of PBS users, July 2020 to December 2024
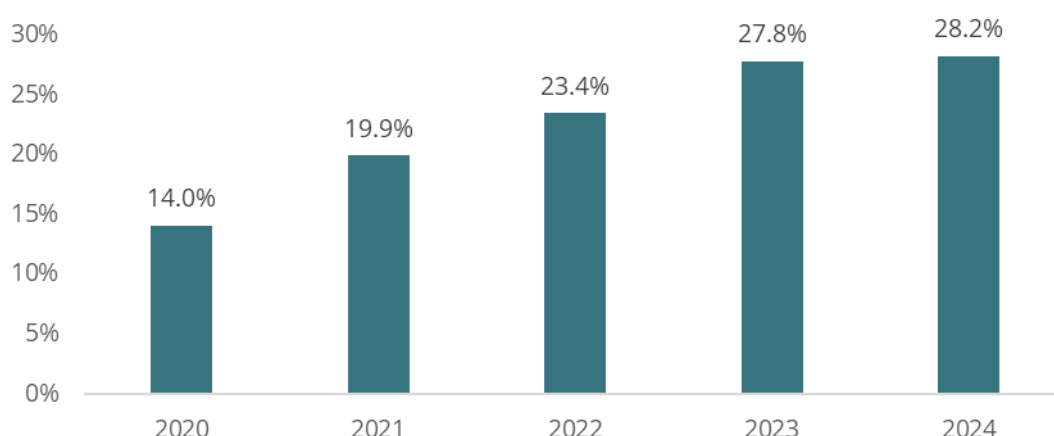
Source: Deloitte analysis using AIHW and ABS data[7,8]

The HMR Rural Loading Allowance (HMR-RLA) complements the HMR Program by supporting pharmacists travelling to consumers in MM 3 to 7 areas. Between July 2020 and December 2024, it supported the delivery of 4,089 reviews (Table 4.4.). This represents just 0.9% of the total reviews conducted through HMR. Noting the limited coverage relative to total reviews, stakeholders reported that the allowance cap of $125 was often insufficient to cover travel costs (refer to Program barriers on pages 22-24 for more details). The low proportion of reviews supported by HMR-RLA may be driven in part by relatively limited workforce capacity for reviews in remote areas which are eligible for the allowance.
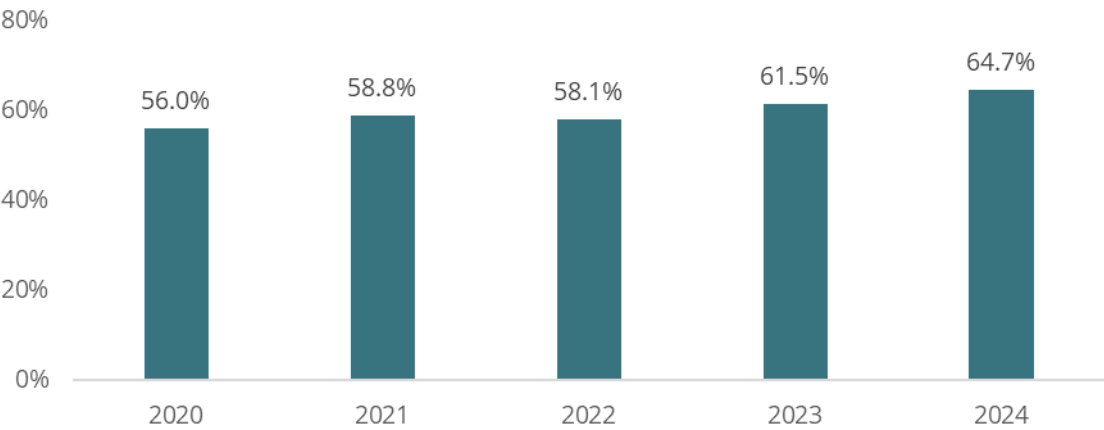
RMMR

RMMR is designed to support pharmacists in providing medication management reviews within residential aged care facilities (RACFs). Between July 2020 and December 2024, RMMR facilitated approximately 520,000 reviews for a total cost of $66 million (Table 4.4).

Chart 4.2. outlines the number of RMMR reviews as a proportion of total aged care residents from July 2020 to December 2024. If it's assumed each review relates to an individual, this would suggest approximately 60% of aged care residents in Australia were reviewed each year on average, with the proportion again

steadily increasing over time. This suggests that the RMMR Program reaches a substantial portion of the target population, with the HMR reaching a lesser share which would be expected given its broader scope.

Chart 4.2: Number of RMMR reviews as a proportion of aged care residents, July 2020 to December 2024

Despite RMMR supporting more reviews over the period, HMR was the more expensive Program, incurring 69% more in expenditure. This is likely in part a reflection of the HMR model being more community focused, with pharmacists visiting individuals living independently in their homes, sometimes in remote areas, while RMMR supports pharmacists to perform reviews across established residential care networks.

While the coverage of HMR and particularly RMMR, appears to be large, it is not clear whether the Programs have been delivered to the expected scale, particularly in target geographies, due to a lack of region level data and any target metrics or performance measures (see Recommendation 1 related to performance measurement).

Although there was a lack of region level data, stakeholders reported that HMR may not adequately service consumer groups with the greatest need in terms of both accessibility and consumer characteristics, as reviews skew towards metropolitan and non-complex consumers.

QUM

QUM is designed to improve the quality of medicine use across approved government funded RACFs through medication advisory activities, education activities and continuous improvement activities.[10] Between July 2020 to December 2024, QUM supported a total of 273,029 activities (Table 4.5). As of December 2024, there were 732 service providers actively participating in the Program.

Chart 4.3. outlines the distribution of QUM activities from July 2020 to December 2024 by activity function. The most common activities were:

- advising on current practices (44%).

- educating staff and medical practitioners (29%),

- auditing and evaluating current practices (26%).

- assisting with the development of policy and procedure (17%).

This suggests that QUM is delivering activities aligned with its intended scope. However, there was no data that outlined the regionalities supported.

Table 4.5 shows a detailed breakdown of the number, function and specific type of activities funded through QUM from July 2020 to December 2024. A total of $43.3 million was spent to facilitate 273,029 activities over

the period, costing approximately $159 per activity (see Tables 4.2 and 4.5). A breakdown of expenditure by activity was not available.

Chart 4.3: Distribution of QUM activities by activity function, July 2020 to December 2024
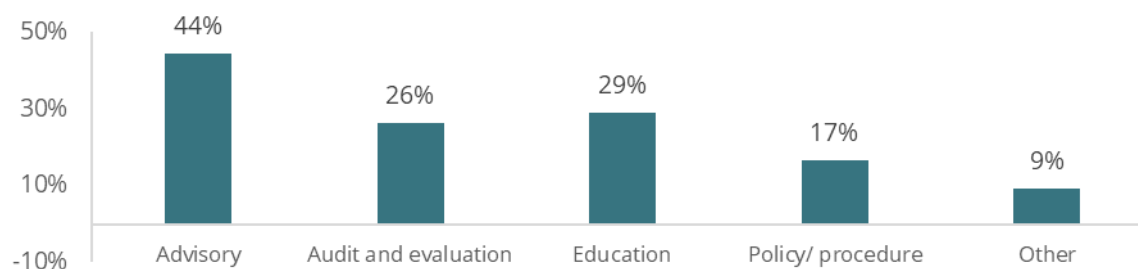
Note**:** Refer to Table 4.5 for the activity type within each function

Table 4.5: Activities funded through QUM, by activity type, July 2020 to December 2024

Activity function	Activity type	Average activities per year	Total activities
Advisory	Medication advisory committees participation	6,568	32,841
	General advisory activities	4,845	24,223
	Assess/ advise on medication storage requirements	2,695	13,476
Audit/ evaluation	Assist with quality indicators	4,067	20,337
	Drug use evaluation	3,744	18,718
	Medication administration audits	3,661	18,305
Education	Provide drug information for medical practitioners and facility staff	7,281	36,404
	Provide in-service for nursing and carers or residents on medication therapy	5,297	26,486
Other	Assist in development of nurse-initiated medication lists	3,361	16,806
	Assess competency of residents to self-administer medications	695	3,474
Policy/ procedure	Assist facility to meet and maintain medication management accreditation standards and comply with regulatory requirements	5,172	25,859

	Participate in policy and procedure development activities	4,006	20,031
	Medication management procedure development assistance	3,214	16,069
Total		**54,606**	**273,029**

4.4   Program Enablers
All Programs

Interdisciplinary collaboration between relevant health professionals.

Stakeholders noted that the follow-up of HMRs/RMMRs was most effective when there was active collaboration between credentialed pharmacists undertaking HMR or RMMR services, General Practitioners (GPs) and/or RACF staff. Active collaboration enabled effective communication between relevant health professionals and ensured that the review recommendations were followed-up and actioned in a timely manner.

RMMR and QUM

Program education and awareness.

Medication management training and education for RACF staff was identified as a key enabler for the optimal delivery of the RMMR and QUM Program. The Aged Care Quality and Safety Commission (ACQSC) provides outreach training to the aged care sector which focuses broadly on various aspects of medicine-related concerns, including medication management. These ancillary education initiatives are thought to increase the awareness of RACF staff around medication management principles as well as what government-funded Programs are available to support with medication management.

HMR

Established relationship between the credentialed HMR pharmacist and consumer.

Stakeholders highlighted the benefit of HMRs conducted by local community pharmacists with a high level of awareness and understanding of the consumer's medical history through an established relationship. This helps to ensure consumers feel more at ease with participating in a HMR, and pharmacists being able to provide more informed recommendations due to a comprehensive understanding of the consumer's medical history and likely ongoing contact with the consumer's GP. This was viewed as also contributing towards enhanced patient-centred care and continuity of care.

4.5   Program Barriers
All Programs

Poor awareness.

Poor awareness of the Medication Management Programs was cited as a key barrier towards uptake amongst stakeholders. In the RACF setting, RACF providers were reportedly unable to identify the difference between RMMR and QUM and generally only participated in the Programs offered by the attending pharmacist, as opposed to what best met organisational and facility need. Stakeholders, including consumer advocates, also commonly expressed that consumers were often unaware of what Programs were available to them and how to access the Programs.[11] In the primary care setting, the value proposition of HMR was

poorly understood, particularly in smaller-scale primary care practices where the burden of participating in the Programs (e.g., time to complete administrative tasks associated with the Programs; low volume of patients who would be anticipated to access Programs) seemingly outweighed the benefits derived.

HMR, HMR-RLA and RMMR

Lack of scaled and indexed funding.

HMR, HMR-RLA and RMMR were consistently cited as lacking scaled funding matched to complexity, rurality and/or effort/time required to deliver the Programs. For example, stakeholders felt that the current remuneration of AUD $222.77 (for the initial HMR service) for HMRs was low considering the significant time and effort involved in complex reviews, and that payment should be scaled based on consumer complexity to maximise report utility.[12]

Additionally, follow-up HMRs were identified as another aspect lacking sufficient payment for both pharmacists and general practitioners (GPs). Many pharmacists completing follow-up HMRs *"out of the goodness of their hearts"* as the remuneration was described as a disincentive for completion. This challenge was reportedly exacerbated for MM 5 to 7 areas. In many cases, pharmacies in isolated communities with a single pharmacist are required to sacrifice dispensary services to deliver HMR or RMMR.

> The available funding does not go far enough. HMR is a flat rate despite what MM category you are servicing, even though the wage costs alone are higher the more remote you travel.
>
> Source: Pharmacy Industry Body

Medication review initiation

Stakeholders highlighted barriers that prevent hospital initiated HMRs from being fully utilised. MBS items 900 and 903 require the GP to be the referring practitioner meaning they are unable to claim for assessing reviews initiated in hospital. Despite being eligible to refer consumers for similar state operated medication review Programs, pharmacists are unable to refer consumers for the HMR and RMMR funding despite their role in the transition of care out of hospital.

Additionally, the strict referral criteria for RMMR was reported as a barrier for consumers receiving timely medication reviews in RACFs. Stakeholders felt that residents/their carers, nurse practitioners or on-site pharmacists (different to those conducting the review) should be able to refer residents for an RMMR service to enable more timely access to care.

HMR

Program Rules.

- Location of a HMR interview. Stakeholders noted the historic prevention of credentialed pharmacists conducting HMRs at a location other than the consumer's home continues to impact pharmacists willingness to conduct these services. This had a disproportionate impact on population groups such as Aboriginal and Torres Strait Islander communities, as well as culturally and linguistically diverse communities, due to their unique cultural sensitivities and needs. Additionally, the current Program rules do not consider consumer safety as an exception for conducting HMRs outside of the home.[12] This has led to a lack of clarity when granting exemptions for consumer safety related concerns, such as domestic violence and impacted the Programs perceived flexibility in meeting consumer needs.

- Caps for HMR. Stakeholders reported the monthly cap of 30 HMRs to both the Service Providers and credentialed pharmacist conducting the Service as a deterrent due to a perceived low return on investment.[1] Pharmacists mentioned that caps limited their ability to sustain a business as a sole HMR-provider and that participating in the Program in addition to dispensing duties was often a time/financial impost. Furthermore, the caps limit service delivery solely based on volume, rather than through a mechanism for regulating service quality which was done for other health professions.

- Polypharmacy criteria for HMR. This criteria was considered too expansive, resulting in the inclusion of consumers who may have not necessarily required/benefited from a review at the expense of higher complexity consumers. This was exacerbated by pharmacists feeling compelled to mostly review low complexity cases as the remuneration for reviewing higher-complexity consumers was perceived as being sub-optimal.

4.6   Effectiveness in achieving intended outcomes

With the aim of optimising medicine use and empowering patients to confidently manage their medicines, the Medication Management Programs intended to achieve a range of outcomes, including reducing adverse drug events and improving the quality use of medicines. In the case of HMR, available data indicates that these reviews identified a range of medicine-related problems, potentially leading to the avoidance of adverse events and deaths.[4] No quantitative data was available to assess the impact of the QUM Program, however the types and number of activities delivered (refer to page 21) suggest the Program may have improved the quality use of medicines in RACFs compared to a scenario in which none of these activities were available. The impact of each Program is discussed below.

HMR

For each HMR conducted, data was collected on the pharmacist's observations and resulting recommendations (Table 4.6), however, this review did not have visibility as to whether HMR recommendations were accepted. Observations included:

- *Polypharmacy*, meaning the concurrent use of more than five prescription medicines, in 84.2% (402,990 of 478,691) of reviews. While not inherently a poor outcome, polypharmacy is associated with increased risk of prescribing errors, medicine adherence, and medicine interactions.[13]

- *Suspected adverse drug events,* in 13.1% (62,758 of 478,691) of the reviews. Adverse drug events can be caused by prescription errors, side effects, non-adherence, medicine interactions or allergies, with consequences ranging from mild discomfort to hospitalisation and death.[14]

- *Medicines with narrow therapeutic range*, meaning there is a small margin between therapeutic and toxic doses and therefore require close monitoring and management, in 8.4% (40,190 of 478,691) of reviews. These medicines are more commonly associated with adverse drug events.[15] All HMR reviews resulted in at least one recommended change to one or more of the consumer's medicines, with each review resulting in 1.8 recommendations on average.

Table 4.6: Reviews, observations and recommendations funded through HMR, June 2020 to Dec 2024

Value	Average per year	Total
No. of reviews	95,738	478,691
Observations		
No. with polypharmacy	80,598	402,990
No. with suspected adverse event	12,552	62,758
No. with narrow therapeutic range	8,038	40,190
No. with other referral	19,771	98,853
Total no. of observations	**120,958**	**604,791**
Recommendations		
No. with recommended increase in dose of one or more medicines	21,832	109,162
No. with recommended decrease in dose of one or more medicines	37,747	188,735
No. with recommended change of medicines to different medicine	36,861	184,307
No. with recommended cessation of one or more medicines	31,315	156,573
No. with other recommendation	43,826	219,129
Total no. of recommendations	**171,581**	**857,906**

RMMR

While data on the number of reviews conducted through RMMR was collected, no additional outcomes data – such as the number of resulting recommendations, observations, or the potential impact of those recommendations – was available to assess the Program's effectiveness.

Stakeholders reported that the RMMR Program provides similar health outcomes to HMR but that its effectiveness can be limited by communication difficulties with consumers diagnosed with conditions such as dementia, resulting in instances of pharmacists consulting with RACF staff instead of the resident for the review.

QUM

There was no quantitative data through which to assess the impact of the QUM Program on reducing adverse drug events or improving the quality use of medicines. Stakeholders, such as pharmacists and consumer advocacy groups, noted that the Program was important for promoting education around medication management and safety among RACF staff, however, were unsure of the extent to which it successfully delivered outcomes.

The Medication Management Programs were noted as having several other broader key policy objectives. These include:

- Improving consumer quality of life,

- Improving consumer understanding of medicines they are taking,

- Facilitating collaborative working relationships between healthcare providers,

- Providing healthcare providers with medicine information for patients in their care,

- Assisting RACFs to undertake continuous improvement activities (QUM only).

In the absence of quantitative data, stakeholder perceptions on the impact of the Programs on these objectives are discussed below.

All Programs

Stakeholders strongly believed that the Programs, when delivered to a high-quality standard, helped consumers, particularly older people, to understand and manage multiple and complex medicine regimens and avoid unnecessary hospitalisation. This was reported to significantly improve a consumer's quality of life.

HMR and RMMR

HMR and RMMR were perceived as generally promoting collaborative working relationships between pharmacists, GPs and/or RACF staff. However, many felt that this collaboration could be further improved through various strategies such as embedding pharmacists into the primary care setting or ensuring that there is continuity of care in the pharmacists undertaking reviews. These strategies are discussed in detail in the 'Efficiency' section (page 27).

In terms of providing healthcare providers with medicine information for their patients, stakeholders felt that while information was provided, the utility of that information heavily depended on the quality of the review reports. Stakeholders reported that a granularity of information was often missing to enable a complete understanding of a patient's medication regimen and rationale for any recommendations.

> We do see a lack of value when we have a consultant pharmacist delivering these – people contracted by the local pharmacist, who don't know our patient and then send very pro-forma reports. There's nothing wrong with a template, but it's the granularity that really helps us which is missing.
>
> Source: Peak healthcare professional body

QUM

Stakeholders generally reported that the Program was important in providing education and training on medication management to RACF staff. Beyond RACFs, it was highlighted that pharmacists conducting similar QUM activities within general practice and other multidisciplinary models of care was effective, particularly for identifying unsafe drug combinations.

4.7   Unintended consequences

The Medication Management Programs were reported as having several unintended consequences relating to service uptake, operating models, Program perception and implementation.

HMR and RMMR

The lack of quality control has resulted in diminished Program perception.

The lack of quality control measures to monitor the quality of review reports has reportedly diminished the perception of the effectiveness/value of these Programs and reduced the rate of recommendation uptake. However, there is a lack of quantifiable data to measure this.

High volume HMR and RMMR business models impact the quality of care.

Business models have become prevalent that prioritise volume over consumer outcomes, often providing generic, pro-forma reports at the expense of quality care. This reportedly incentivises pharmacists to capitalise on low complexity cases, reducing access for high-complexity consumer groups most in need.

HMR and RMMR services impact pharmacy business model in rural and remote pharmacies.

Single pharmacist pharmacies, often found in MM 5 to 7 areas, are unable to provide HMR and RMMR services without sacrificing dispensary operations. Consequentially, pharmacists are providing services out of business hours, on weekends, or are unable to at all in order to continue dispensing. This is a particular issue in remote and isolated areas where access to primary care is limited and pharmacists therefore play a critical role in delivering front-line healthcare.

4.8 Efficiency

While HMR, RMMR and QUM were viewed as beneficial and important to continue, stakeholders noted that modifications to the Programs or coupling them with other initiatives may drive greater efficiencies. These suggestions are described in detail below.

Integrating pharmacists into multidisciplinary teams.

Stakeholders highlighted the need to invest in team-based care, particularly in rural and remote communities, to ensure that the scarce healthcare capability operated at the top of their individual scope of practise and as a team to support consumer needs. According to stakeholders, a team-based approach, such as integrating pharmacists into primary care teams, or employing alternate teaming strategies in rural settings to accommodate for the scarce availability of health professionals, would enable pharmacists to work in tandem with GPs to actively and collaboratively follow-up HMRs and RMMRs and improve the quality of care provided to consumers. Stakeholders noted that this would need to be supported by multidisciplinary team-based funding that appropriately remunerates all stakeholders as well as effective communication mechanisms between health providers.

Embedding HMR referrals into hospital discharge planning.

Noting the complexities associated with hospital-initiated HMRs (refer to page 23), an opportunity was identified by stakeholders to streamline the HMR referral process post-discharge. Stakeholders suggested embedding the process into discharge workflows for public and private hospitals, to mitigate the need for patients to visit their GP for a HMR referral.

Underpinning Programs with policy drivers.

Stakeholders reported the importance of underpinning Programs with policy drivers to promote Program uptake and improve outcomes. For instance, stakeholders felt that the introduction of the new strengthened Aged Care Quality Standards,[16] which highlights the safe and quality use of medicines as a key outcome of *Standard 5: Clinical care,* will optimise the effectiveness of RMMR and QUM by highlighting the importance of medication

management in the RACF setting. This may also support any approaches considered by the Department for regulating the Programs through quality and safety monitoring/auditing.

Streamlining Programs with existing initiatives.

Two initiatives were noted as having the potential to complement the Medication Management Programs to drive greater efficiencies: MedsCheck and the Aged Care Onsite Pharmacist Measure (ACOP).

MedsCheck Program.

MedsCheck is a review of a consumer's medicines, conducted in a pharmacy, designed to identify problems consumers may have with their medicines and to educate consumers on usage and storage of their medicines. This was posed by stakeholders as being a potentially suitable alternative for low complexity consumers who access HMR. This could better target the HMR to consumer need and partly mitigate the issue introduced by caps which often limit the number of consumers who can access HMRs and thereby ensure HMRs are accessible for higher complexity consumers. However, it is important to consider that the MedsCheck Program also has volume caps, can be conducted by any pharmacist and experiences challenges with linkages between primary care. This may impact consumer safety and outcomes as well as place considerable onus on a consumer to communicate their MedsCheck review proactively to their GP for recommendations to be actioned. The streamlining of the Programs therefore must be considered holistically noting the possible implications.

The Aged Care Onsite Pharmacist Measure

ACOP integrates an on-site pharmacist within the healthcare team in a RACF with the aim to improve the safe use of medicines among residents. ACOP was viewed by some stakeholders as being a more efficient service for RACFs as it enabled greater continuity of care for residents and the ability of the ACOP to deliver multiple Programs such as RMMR and QUM simultaneously.

However, some stakeholders expressed concerns in relation to current workforce shortages of credentialed ACOPs and the fact that some ACOPs are resourced only part-time in certain settings. In light of these concerns, stakeholders felt that it was critical to ensure that ACOP did not entirely replace RMMR and QUM, particularly for RACFs unable to access support through ACOP.

Removing the Program Variation requirement for HMRs conducted outside the home for cultural reasons.

Stakeholders suggested that the requirement to submit a Program variation to conduct a HMR outside of the home for cultural reasons should be reconsidered to enhance Program efficiency. For instance, stakeholders reported that in many instances, HMR providers were routinely requesting a Program variation for consumers from Aboriginal and Torres Strait Islander backgrounds and that by integrating this as a consideration into the Program rules would create administrative efficiencies.

Standardising reporting processes for HMR and RMMRs.

Stakeholders noted a standardised reporting format for HMR and RMMR reviews would increase efficiency in both the conduct of the review, and potentially the uptake of recommendations for prescribers. This would also support regulation through quality rather than volume by providing consistent, comparable data that can be used to assess and ensure the effectiveness and safety of these reviews. Additionally, some stakeholders highlighted the potential value of uploading HMR and RMMR reports to My Health Record for promoting better interdisciplinary communication and uptake of recommendations.

5 Aboriginal and Torres Strait Islander Specific Programs

5.1 Key Findings

Key findings for Aboriginal and Torres Strait Islander Specific Programs

1. The IHSPS Program was noted as being particularly beneficial for the Aboriginal and Torres Strait Islander population due to its flexibility in enabling Indigenous Health Services to prioritise the unique pharmacy needs of their community ultimately leading to improve outcomes within that community.
2. The ATSIPSS and ATSIPATS Program were undersubscribed relative to the eligible population. This was attributed to a lack of awareness of the Programs amongst students and universities, as well as a lack of culturally appropriate access to the Programs.
3. Stakeholders suggested efficiency gains could be made across the Programs by revising Program rules with suggestions that included:
   - Administering Programs through Aboriginal and Torres Strait Islander affiliated organisations,
   - Considering combining Programs such as IHSPS with similar evidence-based Programs such as IPAC to maximise effectiveness,
   - Enhancing Program reporting through relevant outcomes data collection and digitisation.

Key output measures

From 2020 to 2024:

- IHSPS delivered 1,789 activities in total (~447 activities per year) for a total investment of $14.8 million.
- ATSIPSS supported 34 active scholarship years (~7 students per year) for a total investment of $481,500
- ATSIPATS supported 41 active trainee years (~5 trainees per year) for a total investment of $317,417.

5.2 Cost-effectiveness analysis

The Aboriginal and Torres Strait Islander Specific Programs (including ATSIPSS, ATSIPATS and IHSPS) are intended to deliver a number of key outcomes which could be used to determine the cost-effectiveness of the Programs. This includes:

- Increased Aboriginal and Torres Strait Islander participation in the pharmacy workforce,

- Improved capability of Indigenous Health Services to meet Aboriginal And Torres Strait Islander pharmaceutical needs,

- Increased access to pharmacy services from Increased Aboriginal And Torres Strait Islander participation in the pharmacy workforce, and

- Improved health outcomes for Aboriginal and Torres Strait Islander People.

However, assessing the impact of the Programs on these outcomes requires the collection of relevant and appropriate data. For example, understanding the impact on increased workforce participation would require data on how many scholars and trainees went on to or continued to work in the pharmacy workforce after the Program ended. Alternatively, primary data sources such as surveys or follow-ups could also be used to track such outcomes.

In considering this analysis, it is important to note that no such outcome data for the Aboriginal and Torres Strait Islander Specific Programs was available to support this review. Only the number positions and activities funded through the Programs was available.

Table 5.1 maps the data required to improve the cost effectiveness analysis for the Aboriginal and Torres Strait Islander Specific Programs. As the table demonstrates, the data available to support this review only allowed analysis of the cost per position and cost per activity.

Table 5.1: Outcomes and required data sources for Aboriginal and Torres Strait Islander Specific Programs

Outcome	Required data sources	Current availability by Program	
		ATSIPSS	ATSIPATS
Increased participation in pharmacy workforce	No. of scholars/ trainees that go on to or continue to work in the pharmacy workforce after the Program ended	✕	✕
Improved capability of Indigenous Health Services	Reports from participating and non-participating Indigenous Health Services on their services and offerings	✕	✕
	Reports from community members on experiences with participating and non-participating Indigenous Health Services	✕	✕
Increased access to pharmacy services	No. of prescriptions for Aboriginal and Torres Strait Islander people in participating and non-participating areas	✕	✕
Improved health outcomes	Reported health outcomes in communities serviced by a participating Indigenous Health service	✕	✕

✓ Available   ✓ Partially/Proxy Available   ✕ Unavailable

Only the number of positions or activities funded and the total expenditure were collected for the Aboriginal and Torres Strait Islander Specific Programs. Table 5.2. shows the resulting cost-per-output ratios. For

ATSIPSS and ATSIPATS, this can be interpreted as the cost per position funded, and for IHSPS, as the cost per activity funded.

Table 5.2: Cost-per-output ratios for Aboriginal and Torres Strait Islander Specific Programs, July 2020 to December 2024

|	2020	2021	2022	2023	2024	Total
ATSIPSS*^	$9,000	$15,000	$15,000	$13,500	$16,500	$14,162
ATSIPATS^	$5,938	$8,550	$8,071	$7,435	$7,906	$7,717
	NA	21/22	22/23	23/24	24/25	Total
IHSPS+		$5,890	$9,364	$10,587	$7,494	$8,260

Note: Totals count individuals separately per year of participation
* Ratios include total expenditure but the count of only active scholars.
^ cost-per-output ratio calculated for number of positions funded + cost-per-output ratio calculated for number of activities funded

For IHSPS, detail on the type of activity funded was collected. Chart 5.1. provides a breakdown of the number of activities and total Program expenditure over time. It shows that although expenditure increased by 57% over the period, the total number of activities delivered declined. Although the reason is unclear, 'QUM pharmacist support activities', which include staff and patient education, medicine quality assurance, continuous improvement and legislative compliance, remain the most common activity type but have decreased slightly.[17] By contrast, the 'QUM devices category activities' decreased more substantially. Noting increasing service delivery costs across government in the context of a highly inflationary environment, the department could consider what is driving these trends. Possible reasons could include increasing workforce costs, increased travel and accommodation costs, or increased complexity of the activities being delivered.

Chart 5.1: IHSPS activities and total Program spend, 2021-22 to 2023-24
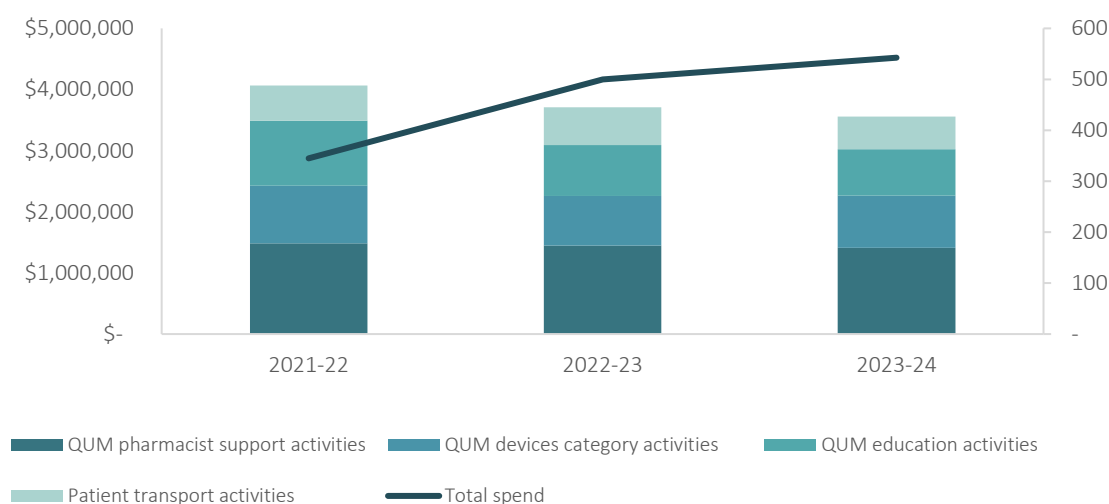

Like ATSIPSS and ATSIPATS, no quantitative outcome data was collected for IHSPS, so the returns on this expenditure is unclear.

5.3   Program Delivery
IHSPS

IHSPS focuses on supporting Indigenous Health Services. From July 2021 to December 2024, 1,789 activities were funded, including 691 (39%) pharmacist support activities, 411 (23%) device support activities, 422 (24%) education activities and 265 (15%) patient transport activities (refer to Chart 5.2.). This was supported by a total Program expenditure of $14.8 million over the period. While a breakdown of expenditure by IHSPS activity was not available, this shows that the majority of activities were related either to direct pharmacist support or quality use of medicine. Meanwhile, 15% of activities helped to ensure that Aboriginal and Torres Strait Islander people could access pharmacy services.

Chart 5.2: Total funded IHSPS activities, July 2021 to December 2024
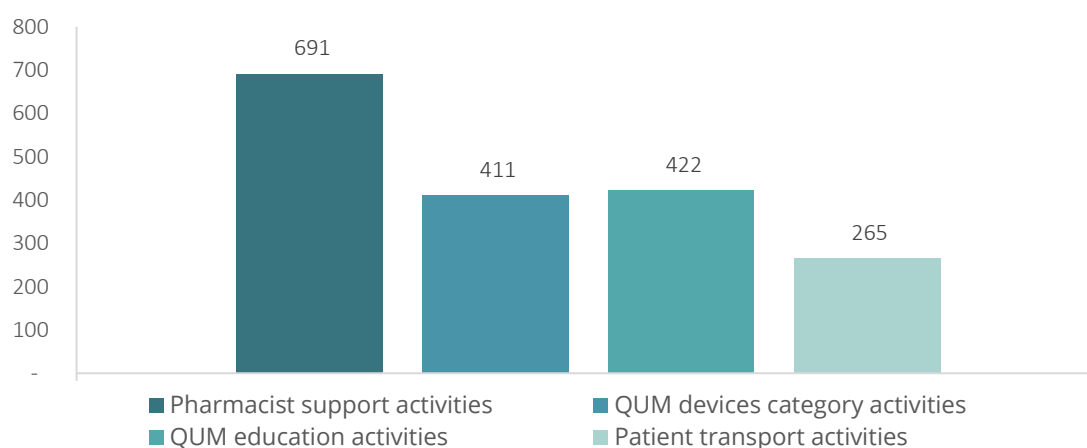
ATSIPSS and ATSIPATS

ATSIPSS and ATSIPATS are focused on supporting Aboriginal and Torres Strait Islander students and graduates to enter the pharmacy workforce. Between July 2020 and December 2024, they provided $481,500 in funding for scholarships for pharmacy students (ATSIPSS) and $316,417 in funding directly to Community Pharmacies to employ pharmacy assistants (ATSIPATS).

Chart 5.3. shows the number of positions supported by these Programs over time. There appears to be no overall trend in the number of positions supported, however this could be expected for a Program of this scale which would be subject to the fluctuations in demand from the relatively small and specific target cohort. However, if an objective of the Programs is to support the longer-term growth of the First Nations pharmacy workforce, an upward trend in Program participation would be expected. To this end, the department could consider whether the Program design and approach to recruitment are optimised to support this.

Stakeholders generally reported that the Aboriginal and Torres Strait Islander placement Programs were delivered as intended and at the expected scale.

Chart 5.3: Active scholarships and placements funded by Aboriginal and Torres Strait Islander Specific Programs over time
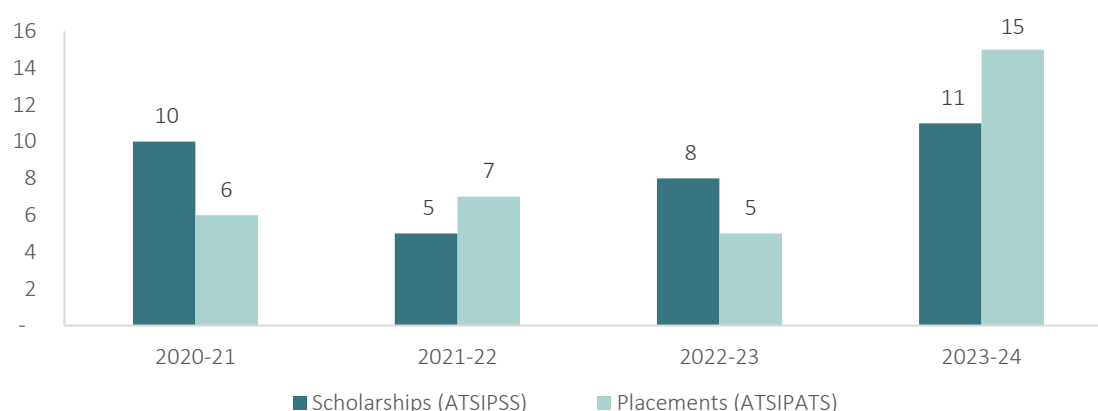
Note: Individuals may participate for more than one year and will therefore be counted multiple times.

5.4   Program Enablers

Stakeholders identified a range of enablers and barriers which were perceived to impact the uptake of the Aboriginal and Torres Strait Islander Specific Programs. These are discussed in detail below.

IHSPS

Program flexibility.

The flexibility of the IHSPS Program was identified by stakeholders as a key enabler for the Program, contributing to its uptake and effectiveness. IHSPS enables Indigenous Health Services (IHS') and Service Providers to tailor the Program based on their local communities' unique needs thereby increasing the potential for optimal uptake and effectiveness. IHSs receive a base rate of $3,000 with additional loading for approved outstations*, and a per client allowance that calculates the cost of service delivery per client, ensuring equitable distribution to address diverse health needs effectively.[18,19] Although no reporting was provided, Indigenous Health Services are required to complete a detailed workplan that outlines the types of support their individual community requires. However, where changes are required to better meet the needs of individual communities, IHS' are able to adjust activities i.e., provide additional transport or purchase additional QUM devices via direct communication with the PPA.

5.5   Program Barriers
All Programs

Low awareness of Programs.

It was reported that there was low awareness of Programs across students, pharmacists and universities. Specifically:

- IHSPS: Stakeholders highlighted that awareness of IHSPS Program rules and structure within IHSs was a barrier. Stakeholders noted this was affected by high staff turnover within IHSs, with confusion surrounding the annual registration period being a key issue.

- *ATSIPSS and ATSIPATS:* A low awareness of the Programs was reported among Aboriginal and Torres Strait Islander students and trainees. This was attributed to poor promotional activities targeting this cohort as well as a degree of confusion regarding the Programs being administered in isolation, separate to other First Nations scholarship initiatives, such as the Puggy Hunter Memorial Scholarship Scheme. Additionally, many Universities noted that they had minimal awareness of the

uptake of these Programs to be able to effectively support their students to access or promote the Programs.

Lack of integration with broader workforce strategy.

The uptake and effectiveness of the Aboriginal and Torres Strait Islander specific Programs was viewed as being impacted by a lack of consideration of how the Programs integrate with a broader First Nations Healthcare workforce strategy and pharmacy workforce in general. Stakeholders felt that there was a lack of a holistic healthcare workforce design model which supported members of the First Nations community in the pharmacy workforce.

> The Programs are not part of a holistic workforce design to support the Indigenous workforce in community pharmacy, and more broadly, they are not part of a broader workforce strategy in terms of rural workforce
>
> Source: Pharmacy peak body

Outdated approved items.

Stakeholders reported that the eligible items within the Program rules should be updated to reflect contemporary patient needs. It was highlighted that the current approved device list should be reviewed, and that the Program could be broadened to include non-PBS items (such as vitamins) that may be cost prohibitive for Aboriginal and Torres Strait Islander patients.

Program rules.

Stakeholders reported that IHSPS rules often exclude IHSs who were eligible for the two Programs that preceded and were combined into IHSPS. Despite this, each year the ineligible IHSs receive special consideration. It was also noted that the Program rules do not stipulate outcomes for IHSPS, contributing to difficulties in outcome measurement.

Administrative inefficiencies.

Stakeholders highlighted the lack of Departmental oversight on IHSPS progress reports as a barrier to monitoring Program quality and outcomes. It was also highlighted that whilst improvements have been made to the IHSPS Program administrative requirements (applications and reporting), there still exists a burden on IHS staff.

ATSIPSS and ATSIPATS

Lack of cultural awareness.

Stakeholders highlighted that the Programs designed to support Aboriginal and Torres Strait Islander pharmacy students and assistant trainees lacked a degree of cultural awareness and sensitivity, particularly from an administration perspective. This was reported due to the administration by a non-Aboriginal and Torres Strait Islander specific organisation which acted as a barrier to students who may be interested in engaging with the Programs but who may find them culturally-inappropriate or inaccessible when applying.

5.6   Effectiveness

IHSPS

Improving health outcomes for Aboriginal and Torres Strait Islander People

The IHSPS Program was viewed as highly beneficial for the Aboriginal and Torres Strait Islander community due to the flexibility in the Program design which enabled Indigenous Health Services to meet their communities' unique needs.

ATSIPSS and ATSIPATS

Increasing Aboriginal and Torres Strait Islander participation in the pharmacy workforce

As of 2023, there were 145 pharmacists working in Australia who identified as Aboriginal or Torres Strait Islander, accounting for just 0.39% of the total pharmacist workforce.[20] In the same year, the two Programs were together supporting 17 Aboriginal and Torres Strait Islander individuals (8 students and 9 pharmacy technicians). This is a significant contribution relative to the existing pharmacy workforce, representing 12% in terms of headcount. If a significant portion of these individuals go on to work in pharmacies, this could result in a substantive increase in the relative size of the Aboriginal and Torres Strait Islander pharmacy workforce. However, there is no data which captures the extent to which individuals supported by the Programs go on or continue to work as pharmacists or pharmacy technicians.

While the coverage of these Programs appears to be large relative to the existing workforce, the stakeholders viewed them as undersubscribed and therefore lacking in optimal effectiveness. A low uptake was often attributed to poor awareness of the Programs and their management by non-Aboriginal and Torres Strait Islander specific organisations.

> We know the Programs haven't been saturated to where they could be. The platform isn't engaging...the Programs are much more passive and, frankly, not culturally safe
>
> Source: Peak body

5.7   Efficiency

Administering Programs through Aboriginal and Torres Strait Islander affiliated organisations.

Administration of certain Programs could be reconsidered to maximise efficiencies. Some stakeholders felt that the ATSIPPS and ATSIPATS Programs would have better engagement rates if administered through a relevant peak body with culturally-safe practices such as the National Aboriginal Community Controlled Health Organisation (NACCHO) or Indigenous Allied Health Australia (IAHA). IAHA was noted as having existing mechanisms through which Scholarship Programs for Aboriginal and Torres Strait Islander students were administered, such as the Puggy Hunter Memorial Scholarship, that could be leveraged to also administer ATSIPSS.

Consider managing Aboriginal and Torres Strait Islander Programs jointly, or by other Department divisions.

Stakeholders noted that these Programs may benefit from being managed by other areas, or in conjunction with other areas of the Department. The First Nations Health Division and Health Workforce Divisions were

highlighted as divisions that could support the reach, efficacy and efficiency in supporting workforce development within Aboriginal and Torres Strait Islander Communities.

Enhance Program reporting and digitisation.

Stakeholders suggested that strengthened reporting of detailed Program outcomes as well as digitisation of Program reports would maximise the potential for Program effectiveness and efficiency.

Considering alternative/complementary Programs.

While stakeholders were supportive of IHSPS, it was highlighted that it may be more efficient to support IHS' through other models such as IPAC. IPAC was a trial Program that compared usual case care with having pharmacists provide medication management services from within Aboriginal Community Controlled Health Services.[21] The IPAC trial found a significant improvement in self-reported adherence to medicines, clinically significant improvements in the control of cardiovascular disease (CVD) risk factors and glycaemic control in patients with type 2 diabetes, and a reduced risk of chronic disease patients developing CVD. The trial demonstrated that 'integrated pharmacists significantly improved quality of care outcomes for adult Aboriginal and Torres Strait Islander patients with chronic disease', efficiently increasing equity of and access to health services, similar to the benefits provided by ACOP in RACFs.[20] It was noted by stakeholders that if this model was to supersede IHSPS that a detailed impact analysis of dismantling and replacing existing Programs should be conducted first.

Reconsider delegation levels for IHSPS workplan sign-off.

CEO approval of work plan submissions was identified as an administrative burden for the IHSPS Program, resulting in delays. Adjusting delegation levels by authorising a secondary delegate to approve work plans was identified as a potential option that could enhance efficiency.

6   Rural Support Programs

6.1   Key Findings

Key findings for Rural Support Programs

1. Stakeholders highlighted the importance of the Rural Support Programs in providing students, interns and locums with opportunities to learn in and experience a rural environment as well as supporting existing rural pharmacists to upskill or expand their scope as frontline services within their community.
2. A lack of scaled funding based on rurality, especially for MM 5 to 7 regions, was identified as a significant barrier for the Rural Support Programs. This was perceived to impact accessibility to the Programs as well as the Programs' ability to promote rural and remote workforce participation and retention.
3. Stakeholders suggested efficiency gains could be made across the Programs by revising Program rules with suggestions that included:
    *   Streamlining access to funding for Rural Support Programs to create efficiencies for smaller Pharmacies with minimal administrative power
    *   Combining similar Programs to increase administrative efficiency, such as CPE and RITA.

Key output measures

From July 2020 to December 2024:

*   ELS supported 439 locum placements (~898 per year) for a total investment of $743,710.
*   IIARP supported 264 internships (~59 per year) for a total investment of $2.5 million.
*   IIARP-EP supported 35 internship extensions (~59 per year) for a total investment of $638,667.
*   RITA supported 318 activities in total (~8 per year) for a total investment of $250,630.
*   RPSS supported 319 scholarships (~64 per year) for a total investment of $2.8 million.
*   RPSS-Mentor supported 349 mentorships (~60 per year) for a total of $123,375.
*   RPSP (Allowance) supported 1,757 placements (~390 per year) for a total investment of $2.6 million.
*   No output data was collected for RPSP (Admin) and RPLO.
*   CPE supported 826 activities (~165 per year) for a total investment of $819,457.

6.2   Cost-effectiveness analysis

The Rural Support Programs (including both position and activity-based Programs) are intended to deliver a number of key outcomes which could be used to determine the cost-effectiveness of the Programs. This includes:

*   Increased pharmacy workforce in rural areas,

*   Improved capability of rural pharmacies,

*   Increased access to pharmacy services in rural areas,

- Improved health outcomes for people living in rural areas, and

- Increased access to professional development and training opportunities for the rural pharmacy workforce.

However, relevant and appropriate data is required to assess the impact of the Programs on these outcomes. For example, data on how many scholars, trainees and interns went on to or continued to work in the pharmacy workforce after the Program ended would be required to understand the impact of the Program on the size of the pharmacy workforce. Alternatively, primary data sources such as surveys of students or interns could also be used to quantitatively track such outcomes.

It is important to note that no such outcome data for the Rural Support Programs was available to support this review. Instead, only the number of positions and activities funded through the Programs was available, although for some Programs this data was broken down by rurality.

Table 6.1. maps the data required to improve the cost effectiveness analysis for the Rural Support Programs. As the table demonstrates, the data available to support this review only allowed analysis of the cost per position and cost per activity.

Table 6.1: Outcomes and required data sources for Rural Support Programs

Outcome	Required data sources	Current availability
		All Programs
Increased pharmacy workforce	No. of scholars/ trainees/ interns that go on to or continue to work in the pharmacy workforce after the Program ended	✕
Improved capability of rural pharmacies	Reports from participating and non-participating rural pharmacies on their services and offerings.	✕
	Reports from community members on experiences with participating and non-participating rural pharmacies	✕
Increased access to pharmacy services	No. of prescriptions dispensed at participating and non-participating pharmacies	✕
Improved health outcomes	Reported health outcomes in communities serviced by participating and non-participating pharmacies	✕
Increased access to professional development/ training	No. of professional development/ training opportunities attended by staff at participating and non-participating pharmacies	✕

✓ Available   ✓ Partially/Proxy Available   ✕ Unavailable

For most of the Rural Support Programs, only the number of positions or activities funded, and the total expenditure were collected. Table 6.2. shows the resulting cost-per-output ratios. For ELS, IIARP, IIARP-EP, RPSS, RPSS-Mentor and RPSP (Allowance), this can be interpreted as the cost per position funded, and for RITA and CPE, as the cost per activity funded. RPSS-Mentor was delivered at a lower unit cost relative to the other Programs, averaging $353 per position funded, compared to IIARP-EP which was most expensive at $18,248 per position. However, this in large part driven by variations across Programs in both the nature of role being funded as well as the duration of positions.

For RPSP (Admin) and RPLO, insufficient data was collected to calculate a cost effectiveness ratio.

Table 6.2: Average cost-per-output ratios for Rural Support Programs, July 2020 to December 2024

IIARP-EP^	IIARP^	RPSS^*	ELS^	RPSP (Allowance)^	CPE+	RITA+	RPSS-Mentor^
$18,248	$9,332	$8,843	$1,694	$1,476	$992	$668	$353

* Ratios only include active scholars.
^ cost-per-output ratio calculated for number of positions funded
+ cost-per-output ratio calculated for number of activities funded

Chart 6.1. shows the cost-per-output ratio for each Program from July 2020 to December 2024. While the ratios for most Programs remain relatively stable over time, which is expected given that most consist of fixed payments per position or activity funded, the ratio for IIARP-EP is very volatile, although remains the highest of these Programs. The reason for this was not clear from stakeholder consultations.

Chart 6.1: Cost-per-output ratios of Rural Support Programs over time, 2020 to 2024
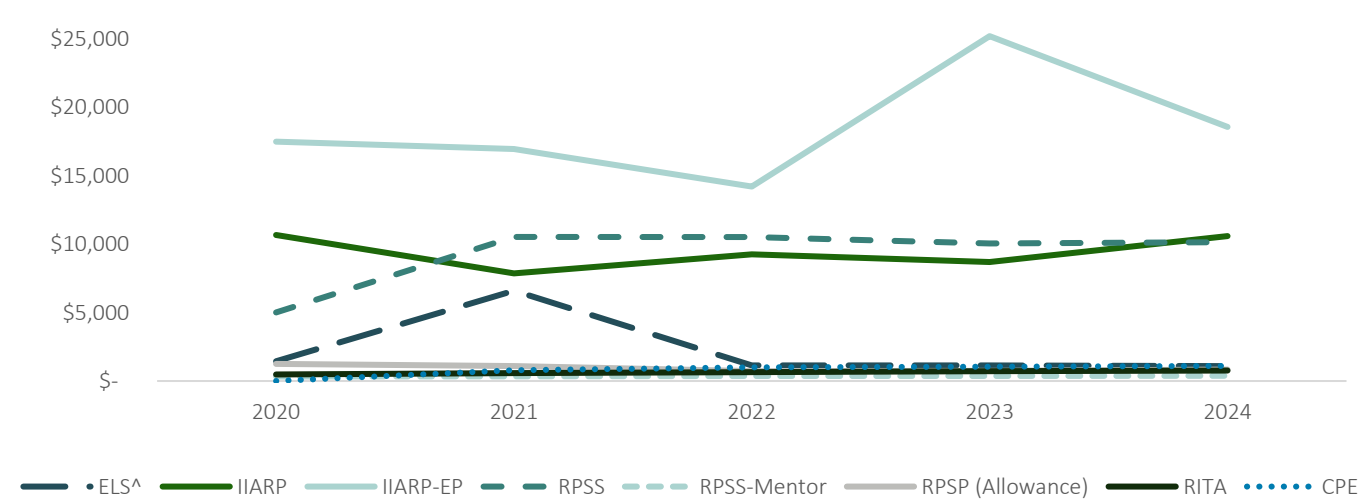
Based on the available data, it was not possible to generate cost-per-output ratios specific to role retention or other outcomes. However, academic research consistently finds that pharmacists with a rural background are more likely to practise in rural areas compared to those without such a background.[22,23] This can include both students from rural backgrounds, or those that have experience working in rural areas during their training. Thus, IIARP, IIARP-EP, RPSS and RPSP (Allowance) are likely to contribute to the size of the rural pharmacy workforce and support the delivery of healthcare in these communities.

Similarly, by supporting rural pharmacies during emergency situations, the ELS enables pharmacies that might otherwise face temporary or permanent closure to continue operating. This helps ensure local healthcare needs are met, reducing the need for residents to travel to other towns, likely generating substantial time and cost savings.

6.3   Program Delivery

ELS, IIARP, IIARP-EP, RPSS, RPSS-Mentor and RPSP (Allowance and Admin)

The Rural Support Programs are designed to support the education and development of the regional, rural and remote pharmacy workforce. In practice, this involves funding and placing interns, students and locums in rural settings and providing scholarships to student pharmacists from rural areas.

Table 6.3. outlines the total positions supported by these Programs from July 2020 to December 2024. A total of $9.4 million was spent over this period to support almost 700 positions per year, with the majority (56%) of all positions supported through the RPSPA-Placement Program. No specific targets were set for budget, or the number of positions funded, so it is unclear whether the overall number of placements align with the intended scale of the Programs. The number of positions and expenditure across MM areas was also not available, creating difficulties in understanding distribution of access across areas of need.

Chart 6.2. displays the proportion of expenditure by Program. More than half of the funding (59%) went towards student scholarships or student pharmacy placements, with the intention that these students will choose to work in a rural setting in the future. The remaining 41% went toward immediate or short-term workforce relief, providing support by placing locums and pharmacy interns in full-time positions in a rural setting.

While this aligns with the intent and scope of the Programs, it could be expected that the intern and locum Programs more directly contribute to the overarching objectives of supporting the rural pharmacy workforce than the student-based Programs, which are not able to provide any guarantee that a student will ultimately choose to work in a rural setting. Published evidence however suggests that rural placements positively impact rural healthcare workforce retention, particularly when students feel supported by staff and involved in the community.

Table 6.3: Positions funded by Rural Support Programs, July 2020 to December 2024

Program	Total positions	Average positions per year	Total Program expenditure
RPSS*	319	64	$2,821,000
RPSP (Allowance)	1,757	390	$2,594,189
IIARP	264	59	$2,463,750
ELS	439	98	$743,710
IIARP-EP	35	8	$638,667
RPSS-Mentor	349	60	$123,375

* Values only include active scholars. Positions may not be unique, for example, pharmacists may have completed more than one ELS placement, and IIARP-EP interns all also completed IIARP.

Chart 6.2: Share of expenditure for the six placement Programs
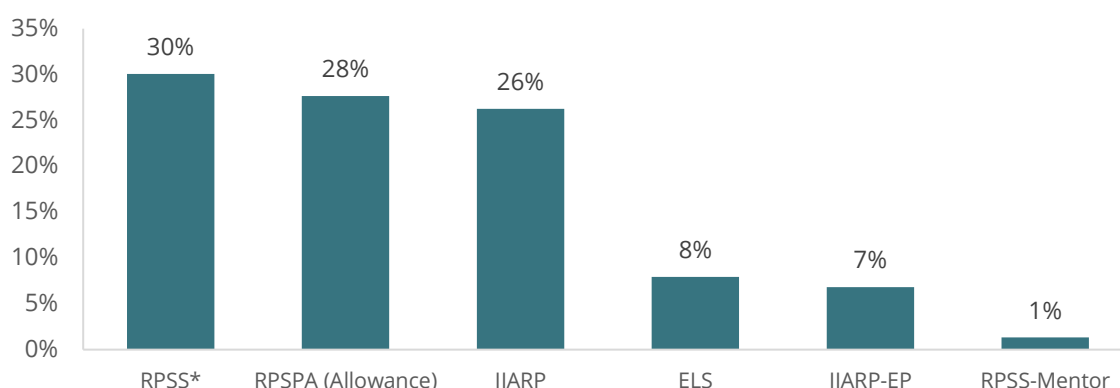
RPSP (Admin) provides administrative support to universities and pharmacies to support student placements in rural and remote areas (i.e., support the RPSP (Allowance) Program). While no quantitative data was collected on the Program, stakeholders reported that it was critical for enabling the RPSP (Allowance) Program, however, funding could be increased as additional administrative costs are currently being borne by universities.

RITA, CPE and RPLO

In addition to placement-based Programs, several Rural Support Programs focus on training and professional development, including RITA, CPE and RPLO.

RITA, which focused on supporting rural interns to access educational activities, supported over 318 activities from July 2021 to December 2024 for an average of 75 per year (see Chart 6.3.). These included workshops, training days, lectures and exams. These activities were delivered to interns working across MM 3 to 7 areas, with the majority (80%) being delivered in large to small rural towns (MM 3 to MM 4). An additional 20% were undertaken in remote communities (MM 6 and MM 7). This suggests that RITA is reaching its target cohort by providing training support to pharmacists in rural and remote settings. Further, the distribution of support approximately aligns with the share of pharmacists by MM category, suggesting that activities have been targeted toward areas of demand.[22] Additional activities were delivered from July 2020 to June 2021, however, MM category was not recorded.

CPE supports rural pharmacists in accessing Continuing Professional Development (CPD) activities by covering their travel costs and course fees. CPE supported access to 826 CPD activities from 2020 to 2024, or approximately 165 per year. These consisted of courses, seminars, workshops and conferences. Data on the number of pharmacists who attended these activities and the locations from which they travelled was not available, making it difficult to assess the extent to which the Program supported pharmacists across different levels of rurality and remoteness. However, stakeholders reported the Program played an important role in supporting access to mandatory training for rural and remote pharmacists, although at times there was confusion surrounding which activities were eligible.

Chart 6.3: Activities funded by RITA, by MM, July 2021 to December 2024
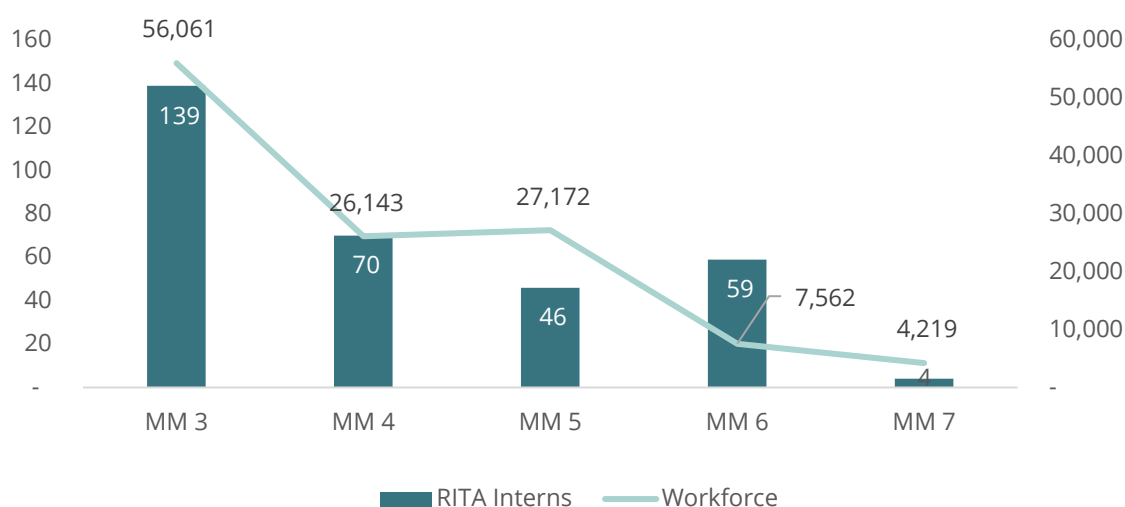
RPLO provides support to community pharmacies and students, promoting inter-professional collaboration, strengthening mentoring Programs, and facilitating professional development. While no quantitative data was collected on the Program, stakeholders reported that it delivered activities in line with its scope and intent but was underutilised due to insufficient funding and employment uncertainty.

6.4 Program Enablers

Stakeholders identified a range of enablers and barriers which were perceived to impact the uptake of the Rural Support Programs. These are discussed in detail below.

RPSS, RPSP (Allowance) and IIARP

Rural students.

Students from rural areas were identified as an enabler for the success of the RPSS, RPSP (Allowance), and IIARP Programs. Students from rural areas are uniquely positioned to contribute significantly to their communities, as feedback from stakeholders indicates that they often choose to return and work in these regions, unlike their metropolitan peers.

RPSP (Allowance and Admin) and RPLO

Complementing RSPA (Allowance and Admin) Programs with the RPLO Program.

Stakeholders highlighted the significant role which RPLOs played in facilitating access between regional, rural and remote pharmacists, students and universities. Universities which participated in both Programs felt that the RPLO was a critical component for facilitating regional, rural and remote placements for students.

6.5   Program Barriers

RPSS

Decentralised scholarship support.

Stakeholders highlighted the decentralisation of scholarships for regional, rural and remote students as a barrier to uptake. Each state, university, and organisation offer different Programs, leading to potential duplication. The absence of a central platform for advertisement complicates students' ability to understand and apply for these opportunities.

RPSS, ELS, RITA, RPLO and CPE

Insufficient funding.

Stakeholders consistently noted that the Rural Support Programs were under-funded and lacked scaled funding based on rurality, especially for MM 5 to 7 regions. Stakeholders also felt that if additional funding were to be provided to Program participants in MM 5 to 7 regions, then remote workforce participation/retention would likely increase. Specifically, the following Programs were identified by stakeholders as having reduced uptake due to funding:

- RPSP (Allowance). Stakeholders felt that the allowance did not sufficiently incentivise students to undertake placements in MM 5 to 7 regions which typically incur higher out-of-pocket costs compared to placements in MM 3 and 4 regions. Placement poverty* was identified as a growing issue for pharmacy students, particularly given the reported shift in the demographic characteristics of the cohort in recent years.[25] This reportedly includes a higher proportion of mature age students who have additional financial, caregiving and/or other responsibilities preventing them from undertaking placements in areas which incur a higher out-of-pocket cost. Additionally, the funding available for RPSP (Admin) was also highlighted as insufficient with extra expenses being absorbed by Universities.

- ELS. The allocation of an emergency locum to isolated regions was cited as an ongoing challenge. Of note, it was highlighted that the Rural Locum Assistance Program (Rural LAP), which provides locums for pharmacists taking planned leave rather than unplanned/emergency leave, provides the locum pharmacist additional incentive payments and a travel allowance which is not included in the ELS Program.

- RITA. Stakeholders reported the $1,500 limit per financial year for RITA was insufficient in supporting training costs.[26] Stakeholders reported interns often have to find peers to share accommodation with in order to stay under the nightly accommodation cap ($200 per night), and also to conserve the yearly funding allocation.

- RPLO. Funding was reportedly insufficient to support a full-time role for this position. This resulted in both contract uncertainty for the position and the need for the RPLO to seek additional employment or resign when a full-time position was available elsewhere.

- CPE. It was reported that the fixed travel caps for pharmacists travelling from more remote areas was quickly reached. For example, if a pharmacist is required to travel from the MM 7 town of Tibooburra (North-Western New South Wales) to Adelaide (the nearest capital city) it is a 1,700 km or 18 hour round trip drive. The pharmacist could opt to drive to Broken Hill and then fly to Adelaide, however this is still a 660 km or 7 hour round trip, before flying. In both instances, the pharmacists will only be reimbursed for 500 km. Stakeholders highlighted that cap of 500 km round trips and the

fixed allowance of $2000 per CPE event was not representative of the increased costs faced by higher MM regions.

RPSS and IIARP

Low awareness.

Stakeholders consistently highlighted that there was a lack of awareness across rural pharmacists and students that these Programs were available, contributing to underutilisation. The following Programs were highlighted by stakeholders as having low awareness:

- RPSS. Stakeholders highlighted that developing the rural workforce from a rural student base would be more beneficial than drawing metropolitan students out, but there is insufficient advertisement targeting rural students at a higher secondary school level. This was cited as a significant barrier as students who "can't see it, won't be it".

- IIARP. Stakeholders noted this Program was underutilised due to low awareness across remote pharmacists, yet it had propensity to contribute to rural workforce development.

ELS, IIARP, IIARP-EP and CPE

Administrative Burden.

Stakeholders reported that the administrative burden of applying for and using the Programs was prohibitive, especially for pharmacies owned and operated by one pharmacist. This was a particular concern for the ELS Program which requires the pharmacist to organise the Locum's accommodation whilst experiencing an emergency. This may dissuade the pharmacist from using the Program in favour of closing their Pharmacy for the day, thereby impacting patient access to medicines and advice.

RPSS, RPSP (Allowance and Admin) and IIAR-EP

Program rules.

Certain Program rules for RPSS, RPSP (Admin) and IIARP-EP were viewed as significant barriers to meeting the needs of students, interns and universities. These pertained to:

- RPSP (Allowance) international student ineligibility. Stakeholders reported that despite the interest and volume, international student ineligibility for the Programs was a barrier. It was suggested that international students in particular may have less attachment and ties to a metropolitan area so may have a greater mobility and willingness to conduct placements and ultimately work in rural and remote areas. This adjustment could be measured in future iterations of the Program, however, consideration of whether international students reside in Australia long-term would need to be factored in.

- RPSP (Allowance) funding model. Stakeholders highlighted that funding for the Program is not fit-for-purpose, given the funding is based on the number of placements undertaken in the prior year. This was viewed as disincentivising Program growth due to the retrospective nature of the funding model.

- RPSS scholarship renewal. Scholarships are renewed one year at a time, rather than being guaranteed for the duration of a student's course (provided they remained eligible). This creates a sense of uncertainty for students, particularly for those who have moved from remote to metropolitan areas to study.

- IIARP-EP annual caps. Stakeholders reported that IIARP-EP positions are limited to 10 places per annum, despite IIARP supporting a significantly larger volume of interns. This limitation affects Program engagement and potentially hinders workforce growth.

6.6 Effectiveness

Effectiveness in achieving intended outcomes.

Strengthening workforce participation/retention in regional and remote regions

The Rural Support Programs are intended to develop and promote the rural pharmacy workforce, whilst strengthening access to PBS medicines.

While data on number of positions funded was collected, no data was collected on outcomes, including the retention rate of interns or the proportion of students who went on to work in rural locations.

For RPSP (Allowance), data on the MM areas in which students were placed can be combined with health workforce data to determine the impact of the Program interns on the size of the local workforce. Table 6.4. shows the percentage change from the existing number of pharmacists per capita following the addition of the placed students. This analysis was completed for July to December 2021 to align with the availability of population estimates from the 2021 Census.

Table 6.4: Percentage increase in number of pharmacists per capita due to introduction of student placements funded by the Placement Program, by MM and state, July 2021 to December 2021

MM	NSW	VIC	QLD	WA	SA	TAS	NT
2	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	NA
3	0.0%	0.0%	0.1%	0.7%	0.0%	0.3%	0.0%
4	0.0%	0.0%	1.1%	0.0%	0.0%	0.0%	NA
5	0.1%	0.0%	0.4%	0.2%	0.0%	0.7%	0.0%
6	0.0%	0.0%	0.6%	0.5%	0.0%	2.2%	0.0%
7	0.0%	NA	0.5%	0.0%	0.0%	0.0%	0.0%

Source: Deloitte analysis using Department of Health and Aged Care Health Workforce Data [27]
Note: MM refers to the Modified Monash Model categories which categorises locations based on remoteness, ranging from MM 1 (major city) to MM 7 (very remote).

This analysis reveals that most regions experienced no impact, or only a very small impact, over this period at the MM level. Tasmania MM 6 areas experienced the largest growth at 2.2%. However, the analysis is undertaken at aggregated MM areas, meaning the impact of placing an intern at an individual region, such as an MM 7, could be significant. For example, remote areas such as Coober Pedy (SA), Longreach (Queensland) and Wyndham-East Kimberly (WA) all had 6 or fewer pharmacists in 2021.[28] This would suggest that the addition of one intern or student on placement would increase the size of the workforce by 25% in terms of headcount during the time of their placement. However, it is unclear whether there is sufficient demand to require an intern despite anecdotal suggestions from peak bodies to the need.

A number of these Programs, such as RPSS and RPSP (Allowance), are largely intended to develop the future pipeline of pharmacy workers for rural areas. It becomes increasingly difficult to assess the impact of these Programs where there is no visibility over whether scholars continue to work in rural areas. However, analysis of reports from the RPSS Program showed:

- Overall, students were appreciative of the scholarship and reported it was either vital for or supported them in achieving their learning goals,

- Mixed commentary on the effectiveness and consistency of mentor interaction – however, overall students appreciated having a mentor and the support they provided.

IIARP and IIARP-EP reporting demonstrated the Interns were supportive of the Program indicating:

- The benefit of understanding the health challenges specific to regional and remote areas. They found the work very rewarding as the first point of contact in areas with limited GP access, playing a vital role in primary healthcare, and

- The experience to be influential in choosing to continue working in regional and remote areas.

Beyond these reports, there was no evidence of the extent to which any of the placement Programs contributed to long-term development of the rural pharmacy workforce.

The ELS Program, on the other hand, works to provide short-term and immediate relief to the pharmacy workforce on an ad-hoc or emergency basis. This requirement to supplement the regional workforce with locum pharmacists, many of which travel from metropolitan areas, suggests that while the Program is successfully funding locums to work in regional, rural and remote areas, it only very marginally increases the size of the workforce in these areas. This would be expected as emergency locums are intended to temporarily replace an existing member of the workforce, not add to it.

Strengthening workforce skills and capabilities in regional and remote regions

Similar to the previous intended outcome, no quantitative data was available to assess the impact of the Rural Support Programs on workforce skills and capabilities in regional and remote regions. However, stakeholders generally perceived the Programs to have had a positive impact on this outcome.

Stakeholders highlighted that Programs such as RPSP (Allowance), IIARP/EP and ELS provided an invaluable opportunity for students, interns and locums to upskill their clinical practice by being in a regional and remote environment. This was attributed to regional and remote areas having a unique learning environment that exposed pharmacists to a range of clinical problems with varying degrees of complexity which may not be experienced in a metropolitan region where access to various healthcare services/specialties is abundant. As such, the Programs were perceived by stakeholders as strengthening workforce skills and capabilities among junior pharmacists who may ultimately consider a long-term career in regional and remote regions.

The consideration of an overarching rural pharmacy workforce strategy was consistently highlighted by stakeholders as an opportunity to further optimise the ability of the Programs to strengthen workforce skills and capabilities in these regions. This is discussed in further detail in the Efficiency section on page 47.

6.7   Unintended Consequences

Rural Support Programs were reported as having some key unintended consequences relating to funding, reimbursement, and their implications on hospital pharmacy.

RPSP (Allowance and Admin) Program unable to grow over time due to retrospective funding.

Stakeholders noted that the retrospective nature in which the RPSP Program was funded, according to historical growth rate, resulted in an unintended negative impact whereby the Program is unable to grow over time. Stakeholders indicated that funding for each year is determined by the number of placements completed in the previous year, resulting in a 12-month delay as university pharmacy Programs expand.

This results in scenarios where students express interest in participating in the Program but are turned away due to a lack of funding.

Students decline to participate in Programs due to reimbursement model.

Stakeholders reported that the requirement for students to bear upfront costs, prior to reimbursement, can be prohibitive. However, it was highlighted that this was dependent on the individual university and the way they chose to internally manage their Program funding.

Community pharmacy Programs detract from the hospital pharmacy workforce.

Stakeholders noted that the internship and placement-oriented Rural Support Programs negatively impacted the number of students willing to undertaking placements/internships in rural and remote hospitals. Stakeholders felt that similar incentives should be offered for the hospital setting to ensure appropriate workforce distribution across rural and remote communities. It is important to note that public hospital pharmacy positions (including internship roles) are funded by State and Territory Governments based on their hospital activity revenue. Therefore, any incentives provided to hospital-based Programs will require coordination with State and Territory Governments.

6.8 Efficiency

Considering Programs through the lens of a broader rural pharmacy workforce strategy.

Stakeholders suggested that greater efficiencies and effectiveness of the Rural Support Programs could be achieved by considering the Programs as part of a broader rural pharmacy workforce strategy. This strategy could enable active targeting and tracking of retention and recruitment efforts into rural and regional areas, as well as promote the development of core capabilities and skills for the regional and remote pharmacy workforce. Additionally, it could support the appropriate and balanced distribution of pharmacists across community pharmacies and hospitals in these regions.

Enforcing placement hours report submission deadlines for RPSP (Allowance).

Stakeholders reported that the delay in receiving funding as a result of inefficient university Program report submission could be resolved by more stringent deadlines. Currently there are limited mechanisms for administrators to enforce submission deadlines, and as there are no adverse results for the universities, there is reduced motivation to adhere to submission timelines.

Streamlining administration and funding.

With appropriate guard rails, rural and remote pharmacy service's access to Rural Support Programs could be streamlined strategically to maximise efficiencies and effectiveness.

This could be achieved through access to a single streamlined funding/administrative mechanism that enables smaller rural and remote pharmacies to access all Programs without the administrative burden that is currently required to string multiple programs together. This would enable the recruitment of additional FTE to support appropriate access to and delivery of multiple Programs whilst minimising risk to pharmacy owners.

Streamlining Programs with existing initiatives.

Stakeholders highlighted opportunities to combine Programs with similar objectives to maximise administrative efficiencies. However, this should be cognisant of not losing each individuals Program's original intent. Suggestions for combining Programs as recommended by stakeholders, are listed below:

- CPE and RITA - Both Programs provide support for pharmacists and pharmacy students to attend training and are designed to complement one another.

- IIARP and IIARP-EP – Both Programs support rural pharmacies to attract and retain newly registered pharmacists with IIARP-EP being an extension of IIARP.

Additionally, efficiencies may be gained by considering the interplay between the Health Workforce Scholarship Program (HWSP), CPE and RITA. The HWSP includes support to pharmacists and provides scholarships and bursaries to help health professionals in rural and remote Australia retain and enhance their skills, capability and scope of practice. The initiative is Commonwealth funded but state administered. Between 1 July 2022 – 31 June 2023, HWSP supported over 5000 bursaries and 487 scholarships across the national health workforce.[29]

7 Consolidated opportunities to support efficiencies

7.1 Opportunities identified by stakeholders

Stakeholders consulted throughout the Review identified several opportunities to strengthen the 17 Programs. These opportunities are broadly categorised into data, funding, Program rules, governance and administration, and system (Table 7.1).

Table 7.1: Opportunities identified by stakeholders

	#	Opportunities	Medication Management Programs	Rural Support Programs	Aboriginal and Torres Strait Islander Specific Programs
Data	1	Refine existing data collection and reporting requirements to focus on outcomes data that will enable the measurement of short, medium and long-term objectives for each Program.	✓	✓	✓
	2	Regularly share insights gathered from Program data with key stakeholders to demonstrate the reach and effectiveness of Programs and to promote further uptake.	✓	✓	✓
	3	Where possible, digitise reporting requirements for Programs to enable efficient data collection.	✓	✓	✓
Funding	4	Align the remuneration structure for Rural Support Programs with that of the scaled approach for the RPMA based on rurality.		✓	
	5	Bundle existing Program-specific travel and accommodation allowance to support all Programs that require travel such as the ELS and RMMR Programs.	✓	✓	
	6	Adjust payments for HMRs, including follow-up reviews, to reflect the complexity of cases, time and effort involved in undertaking reviews.	✓		
	7	Adopt a prospective funding approach for the RPSPA (Allowance) Program to enable an increase in the number of placement positions offerred to students.		✓	

	#	Recommendation			
Program Rules	8	Consider expanding the eligibility critiera of the RPSPA (Allowance) Program to international students.		✓	
	9	Explore opportunities to regulate the conduct of HMR and RMMRs through a quality metric rather than a cap or alternatively marginally increase the cap to support single credentialed pharmacists sustain a business that's comparable to a dispensing pharmacist.	✓		
	10	Modernise the criteria for the HMR Program to ensure that complex consumers are prioritised. This may involve adjusting the polypharmacy criteria and/or restructuring the Program into tiers that reflect varying levels of consumer complexity.	✓		
	11	Expand the types of personnel who can refer consumers to the HMR and RMMR Programs, such as nurse practitioners, to enable more timely and efficient access to care.	✓		
	12	Enable follow-up HMRs to be undertaken via telehealth platforms and channels.	✓		
	13	Consider updating HMR Program rules to enable consumer interviews for HMR services to be conducted in a location outside of the home for cultural reasons, without the need for a prior approval. Include 'patient safety' as an exemption to home-based reviews that can be granted prior approval.	✓		
	14	Review and update approved items in the IHSPS Program Rules to reflect more contemporary practice and consider the inclusion of select non-PBS items.			✓
	15	Amend/reduce IHSPS delegation levels to sign-off on workplans to improve workflow efficiencies.			✓
Governance & Administration	16	Regularly undertake promotional activities to increase awareness of Programs across the health care sector and community.	✓	✓	✓
	17	Enable access to funding for Rural Support Programs as a single package to enable isolated pharmacies to leverage the combined funding to recruit additional FTE to support the delivery of Programs.		✓	
	18	Explore a team-based funding approach that maximises the scope of individual health professionals to meet patient needs, particularly within rural and remote locations where there is limited capacity for patients to access services.	✓	✓	

	19	Consider administering Aboriginal and Torres Strait Islander specific Programs through or in collaboration with the National Aboriginal Community Controlled Health Organisation (NACCHO) to increase the uptake and cultural safety of the Programs.			✔
	20	Monitor the quality of HMR and RMMR reports, including whether follow-up reviews have been undertaken, to ensure consumer safety and quality of care as well as alignment with the Strengthened Aged Care Quality Standards.	✔		
System	21	Promote strategies to better integrate pharmacists into a true multidisciplinary model of care in which they work synergistically with GPs and RACFs to deliver the Programs.	✔		

Conclusions and recommendations.

8   Recommendations

The 17 Pharmacy Programs provide critical support to the targeted demographics. Whether that be consumers, residents, pharmacists, students or First Nations community members. Ultimately stakeholders perceive that the Programs support:

- The quality use of medicines.

- Assistance to minimise adverse drug events.

- Provide culturally appropriate services for Aboriginal and Torres Strait Islander people.

- Access to PBS medicines and pharmacy services for people living in rural and remote regions of Australia.

Despite the success that is detailed in this report, the continuation of a business-as-usual approach to the administration of these Programs is not considered a sustainable approach for the Department. This is namely due to the limited outcome data captured across the majority of Programs, an issue that has been detailed in previous evaluations and reviews. This impacts the ability of the Department to assess performance and ultimately ensure that Australian taxpayers are receiving value for money.

As such the following section provides a suite of recommendations for further consideration; noting that it leverages both the detailed data analysis undertaken and opportunities identified by stakeholders throughout consultation.

Recommendation 1: The Department should strongly consider the establishment of a Monitoring and Evaluation Plan (M&E Plan) that contains a minimum set of agreed outcome indicators to assess Program effectiveness. This should be accompanied by relevant processes, tools and mechanisms to collect the requisite data for enacting the M&E Plan.

The M&E Plan would support funding recipients to capture appropriate data that can be drawn upon to monitor and assess the impact of the Program at varying points in time across the funding cycle. This should be cognisant of administrative burden on frontline pharmacists but shift administration requirements from compliance to an outcome focused approach that ultimately supports the assessment of individual Program performance. Refer to Appendix D for a list of data items suggested for collection.

Acknowledging the vast discrepancies in planned outcomes between the 17 pharmacy Programs the indicators would ideally contain a set of shared metrics to enable comparison. The identified indicators should also draw on the significant research underway across the pharmaceutical sector to determine appropriate clinical indicators. Initially the Department could consider a mix of indicators as appropriate for individual Programs, including, but not limited to:

- Consumer demographics (including locale)

- Number of medication reviews undertaken

- Number and type of pharmacist recommendations

- Acceptance of pharmacist recommendations by prescriber/referrer

- Likely impact or impact of recommendation on medicine problems (including avoided adverse drug events and hospitalisations)

- Consumer quality of life

- Retention of trainees, interns and scholarship holders (including time in role)

- Impact of locums on potential pharmacy closure.

The collection of relevant outcomes data should be supported by relevant processes, tools and mechanisms to collect the requisite data for enacting the M&E Plan. This could include a standardised and digitised reporting template for Programs to enable efficient collection of relevant data.

Recommendation 2: The Department could explore opportunities to scale funding for Programs based on complexity, time, and location to ensure that remuneration is commensurate with delivery expectations and ensure that pharmacists are incentivised to provide services to rural communities and complex patients. This would also negate the need for the additional rural allowances that are provided within the current Program rules.

The current approach to remuneration across all Programs including those delivered by pharmacists or those accessed by students treats the implementation environment as the same regardless of individual circumstances. This discounts factors that drive investment requirements. As such the Department may consider changes to the remuneration or funding available to consider:

- Complexity of consumer needs either via demographics or health condition

- Location requirements between MM 3 to 7

- Low-income communities.

The implementation of such an approach would ideally be piloted within an agreed location to support successful implementation and involve the development of a funding framework that could provide a base payment for each individual Program by MM location and then include a multiplier based on complexity. The complexity score could leverage existing tools to measure a consumer's pharmaceutical complexity such as a C-score which considers factors like the number of medicines a patient is taking, their age, and medical conditions.

To prevent the inappropriate use of such an approach, analytics that help to identify anomalies or patterns indicative of rorting will be key to ensure targeted audits and verification can be undertaken. Consideration could also be given to performance metrics for individual Programs. For example, conducting quality monitoring for HMRs through direct engagement of GPs requesting a HMR and ensuring that the provided report met the quality rating required as a hurdle before the conduct of an audit.

Recommendation 3 [HMR specific]: The Department could consider removing the cap on the number of HMRs a credentialed pharmacist can complete to ensure that consumers have equitable access whilst also move to a regulatory approach that assesses quality through quality audits / prescriber engagement on utility of developed reports.

Whilst acknowledging their role in managing the overall spend of the HMR Program, and preventing systematic rorting of the Program Rules the current cap disincentivises pharmacists to become credential pharmacists and offer the Program. This was reportedly due to an inability to capture revenue equivalent to

a standard dispensing role. This is particularly the case in rural and regional environments that suffer from a low density of pharmacists and ability to attract additional pharmacists without additional funding.

To support this process, the Department, in consultation with the PSA, may also consider how it provides a standardised reporting template for use by credential pharmacists when conducting an HMR. This would also likely improve efficiency for prescribers whilst driving consistency of approach.

Recommendation 4: The Department could consider developing a Pharmacy Workforce Strategy to support a consistent and targeted approach to supporting the development of the pharmacy workforce.

A Pharmacy Workforce Strategy would support a streamlined and strategic approach to the funding of the targeted workforce Programs within the Aboriginal and Torres Strait Islander and Rural Support Programs. Within the current Programs significant funding is provided to support the attraction, recruitment and retention of the pharmacy workforce to rural and regional Australia. However, the implementation of these Programs appears to take an inconsistent approach to support, rather than a strategy and deliberate attempt to grow the pharmacy workforce that all stakeholders can contribute towards achieving.

It is important to note that the current Programs should continue until such time as they can be integrated into a broader strategic approach to workforce growth for the pharmacy sector.

Recommendation 5: Recommendation 5: The Department, in partnership with the PSA and with the support of NACCHO, could consider the implementation of an awareness initiative to ensure that eligible participants, including pharmacists and consumers, are aware of the Programs. In particular, focus should begin on Aboriginal and Torres Strait Islander Specific and Rural Support Programs.

A clear promotion and awareness raising initiative would help to raise the profile of the pharmacy Programs and ensure that Programs have sufficient uptake. Importantly, any initiatives to raise awareness should ensure that they are designed with the target audience in mind. This would be particularly beneficial for the Aboriginal and Torres Strait Islander Specific Programs such as ATSIPSS and ATSIPATS which had a low uptake that stakeholders attributed to poor culturally appropriate promotion.

Recommendation 6: The Department could consider opportunities to modernise the existing Program rules to promote flexibility in Program delivery that recognises changes in delivery models available to pharmacists. This might include expansion of eligible referring clinicians to capture acute and community settings, incorporation of telehealth to support access, and revision of eligibility criteria to better target populations in need.

Modernisation of the Program rules would ensure that the Program's reflect the current clinical delivery environment. This would help to ensure that the Programs are appropriate for key users, more likely to be adopted and effective in delivering their intended outcomes. This may include consideration for:

- Modification to the polypharmacy criteria for HMR eligibility to better target consumers needs.

- Expansion of eligible referring individuals for HMR and RMMR to account for changing professional practice; for example, this might include nurse practitioners, hospital pharmacists.

- Incorporation of telehealth as an option for Programs to support flexible delivery models, particularly in those areas classed as MM 5 to 7 or where a pharmacists would otherwise be required to travel to those areas.

- Revision of exemptions for HMRs in the home

- Revision of approved items in IHSPS

- Amendment to delegation levels for IHSPS.

Importantly, any changes to the Program rules, should balance optimal consumer quality and safety.

Recommendation 7: The Department could consider opportunities to improve the transparency of Program utilisation and success via building a reporting dashboard (or similar) for public access. This could be managed and updated by the PPA.

Leveraging the M&E Plan, a publicly-accessible dashboard which highlights key outcome metrics of Programs would enable data sharing across the Pharmacy ecosystem. By having access to Program data, key end-users such as pharmacists and universities could develop an understanding of the effectiveness and value of the Programs and feel incentivised to tailor their local methodologies to drive local uptake of Programs to ultimately improve the health and wellbeing of Australians. A key example is the RPSP (Allowance) and ATSIPSS Programs, whereby access to publicly available data for total versus successful application rates would assist Universities in understanding how to best promote/target the Programs across their student cohorts.

Recommendation 8: The Department could consider which entity is best placed to administer the Programs targeted at Aboriginal and Torres Strait Islander pharmacists/community members to ensure cultural safety and centralised approach to support.

A culturally-safe and centralised administration mechanism for Aboriginal and Torres Strait Islander specific Programs may drive great awareness and higher uptake of the Programs. This could potentially be achieved through the consideration of an Aboriginal Community Controlled Health organisation as the central administrator. This would enable the Programs to be promoted and administered alongside other initiatives available for Aboriginal and Torres Strait Islander communities.

Additionally, the Department could integrate this into the proposed workforce strategy and look to ensure that there are sufficient and sustainable positions available for

graduates of these Programs, both scholarships and traineeships. This may involve collaboration with tertiary institutions to ensure pathways as well as pharmacy owners.

Appendices.

Appendix A: Cost-effectiveness analysis | Analytical framework

The cost-effectiveness analysis completed in this report was undertaken according to the high-level methodology outlined on pages 8-9. The variables calculated as part of this analysis are outlined in the analytical framework below in Table A.1.

Table A.1: Cost-effectiveness analysis analytical framework

Cost effectiveness variable(s) (indicative)	Indicative measures and inputs	Relevant Programs
Cost per review	Number of reviews undertaken	• Home Medicines Review (HMR)
	Program implementation and delivery costs	• Residential Medication Management Review (RMMR)
Cost per pharmacist recommendation **Cost per accepted pharmacist recommendation** **Cost per potential avoided adverse drug event**	Number of reviews undertaken	• Home Medicines Review (HMR)
	Number of recommendations made	
	Number of changes to medication regimen	
	Number of potential avoided adverse drug events	
	Program implementation and delivery costs	
Cost per interventions / plans successfully implemented	Number of educational activities delivered	• Quality Use of Medicines (QUM) Program
	Number accreditation activities supported	• Indigenous Health Services Pharmacy Support (IHSPS) Program
	Program implementation and delivery costs	• Rural Intern Training Allowance (RITA) • Continuing Professional Education (CPE)
Cost per position supported	Number of positions supported (mentorships, scholarships, internships, locums etc)	• Aboriginal and Torres Strait Islander Pharmacy Scholarship Scheme (ATSIPSS) • Aboriginal and Torres Strait Islander Pharmacy Assistant Traineeship Scheme (ATSIPATS) • Emergency Locum Service (ELS) • Intern Incentive Allowance for Rural Pharmacies (IIARP)

		- Intern Incentive Allowance for Rural Pharmacies - Extension Program (IIARP-EP) - Rural Intern Training Allowance (RITA) - Rural Pharmacy Scholarship Scheme (RPSS) - Rural Pharmacy Scholarship Mentor Scheme (RPSS-Mentor) - Rural Pharmacy Student Placement Allowance (Allowance) and Administrative Support to Pharmacy Schools Scheme (Admin Support)

Appendix B: List of Stakeholders Engaged

A list of stakeholders engaged throughout this review is outlined below in Table B.1.

Table B.1: List of stakeholders engaged

Stakeholder	No. of Consultations	No. of Attendees	Organisation Role
Advanced Pharmacy Australia	2	13	A peak body which promotes innovative practices, professional development, and advocates for enhanced pharmacist roles within the healthcare system.
Aged Care Quality and Safety Commission	1	3	Regulates and ensures the quality and safety of aged care services through compliance monitoring and consumer protection.
Ageing Australia	1	1	The national peak body for aged care, supporting and representing providers of retirement living, seniors housing, residential care, home care, community care and related services
Council of Pharmacy Schools Australia and New Zealand	1	1	Aims to advance and promote pharmacy education and research, the discipline of pharmacy and the pharmacy profession.
Council on the Ageing	1	2	Promotes, improves and protects the wellbeing of older people in Australia as citizens and consumers.
DoHAC Pharmacy Branch - Community and Indigenous Pharmacy Programs Section	2	7	Overseeing pharmacy services and policies across Australia, with particular attention to community and Indigenous pharmacy Programs.
National Aboriginal Community Controlled Health Organisation	1	1	The national peak body representing 146 Aboriginal Community Controlled Health Organisations (ACCHOs) across Australia. NACCHO provides policy and budget advice to the government, advocating for community-based solutions that improve health outcomes.
National Australia Pharmacy Students Association	1	1	The peak representative body for pharmacy students in Australia providing a range of services and supporting our members and local branches.
Pharmaceutical Society of Australia	1	6	The national Peak Body for Australia's 40,000+ pharmacists, bringing together every pharmacist from every sector and connecting

			them with the resources and professional development they need to succeed.
Pharmacy Guild of Australia	1	3	Represents the interests of Members in industrial matters in the Fair Work Commission and state jurisdictions as well as providing local member support and advice regarding workplace relations matters.
Pharmacy Programs Administrator	3	9	The agency responsible for administering, processing and paying claims for the Community Pharmacy Programs funded by the Department.
Primary Health Networks	2	15	31 Independent organisations funded by the Commonwealth to manage health regions.
Professional Pharmacists Australia	1	2	The union and professional association that represents non-owner community and hospital pharmacists and pharmacy technicians.

Appendix C: List of Documents Reviewed

Table C.1 provides a list of documents that were reviewed as part of Program data and literature scan review.

Table C.1: List of documents reviewed

Documents Reviewed	
Administration - Cleared	RIPAA - Additional Comments Member Feedback
AdPha Submission to Deloitte's Pharmacy Programs Cost-effectiveness review - March 2025	RIPAA - Community Pharmacy Single Employer Model for thin markets and areas of disadvantage
ATSIPATS - Cleared	RIPAA - General Comments
Chen 2019 Aust J Ageing_RMMR systematic review	RPLO - Cleared
CPE and RITA - Cleared	RPSMS Report_Redacted - Cleared
D25-778551 Draft IHSPS Review Report - June 2023 - CONFIDENTIAL DO NOT DISTRIBUTE	RPSS End of year report_Redacted Pt1 - Cleared
Data Request Index - Cleared	RPSS End of Year Report_Redacted Pt2 - Cleared
ELS - Cleared	Rural Placement Locations - Cleared
HMR RMMR QUM by State - Cleared	Scholarships and Mentors - Cleared
IHSPS - Cleared	Sluggett 2021 IJERPH_National trends in HMR RMMR provision 2009-2019
IIARP and EP - Cleared	Sluggett 2021 JAMDA_Variation in provision of RMMRs on entry to LTCFs
IIARP and EP end placement claim data - Cleared	Sluggett 2021 MJA_RMMRs in Australian RACFs
IIARP End Placement Report_Redacted Pt1 - Cleared	Sluggett 2022 Age Ageing_RMMR and mortality hospitalisations falls in RACFs
IIARP End Placement Report_Redacted Pt2 - Cleared	Sluggett 2022 BMC Geriatr_Medicines use before and after RMMR in LTCFs
IIARP-EP End-Placement-Report_Redacted - Cleared	Sluggett 2024 Am J Epi_Med Management LTC pharmacoepi commentary
Inacio 2023 AJA_Primary healthcare service use by aged care residents 2012 to 2017	Sluggett 2024 RSAP_Health outcomes post HMR HCPs
Kalisch Ellett 2018 JPPR_Uptake of HMRs	Thapaliya 2024 Ag Clin Exp Res_ Primary allied health use by HCP recipients before after entry

Non 8CPA Service Provider location by State - Territory - Cleared	Total Claims approved 2020 - Cleared
NRHA Workforce Statistics	Total Claims approved 2021 - Cleared
Program expenditure - Cleared	Total Claims approved 2022 - Cleared
Program Registrations - Cleared	Total Claims approved 2023 - Cleared
Rahja M et al 2022_JAD_Primary and Secondary Care Related Quality Indicators for Dementia Care Among Australian Aged Care Users National Trends, Risk Factors, and Variation	Total Claims approved 2024 - Cleared
RFDS Report Workforce Statistics	

Appendix D: Data Improvements

Table D.1 outlines the data required to measure cost-effectiveness of the in-scope programs against data that was available for the current review. If collected this data would allow for a more accurate and complete estimation of program cost-effectiveness.

Table D.1: Data requirements for cost-effectiveness analysis

Outcome	Required data sources	Current availability by Program		
		HMR	RMMR	All
Medication Management Programs				
Changes to medication regimen	No. of reviews undertaken	✓	✓	NA
	No. of recommendations accepted (including whether fully or partially accepted)	✗	✗	NA
Avoided adverse drug events	No. of adverse drug events for participants and non-participants	✓	✗	NA
Avoided hospitalisations	No. of hospitalisations for participants and non-participants	✗	✗	NA
Avoided deaths	No. of deaths for participants and non-participants	✗	✗	NA
Improved health and quality of life	Reported health quality of life for participants and non-participants	✗	✗	NA
	No. of disabilities resulting from adverse drug events for participants and non-participants	✗	✗	NA
Increased productivity	Reported employment rate for participants and non-participants	✗	✗	NA
	Reported absenteeism and presenteeism for participants and non-participants	✗	✗	NA

Reduced or more optimised PBS expenditure and allocation	Nature and urgency of recommendations made (i.e., change in dose, prescription of new medicine)	✓	✗	NA
	Cost to PBS for existing and new medication regimens	✗	✗	NA
Rural Support Programs				
Increased pharmacy workforce	No. of scholars/ trainees/ interns that go on to or continue to work in the pharmacy workforce after the Program ended	NA	NA	✗
Improved capability of rural pharmacies	Reports from participating and non-participating rural pharmacies on their services and offerings.	NA	NA	✗
	Reports from community members on experiences with participating and non-participating rural pharmacies	NA	NA	✗
Increased access to pharmacy services	No. of prescriptions dispensed at participating and non-participating pharmacies	NA	NA	✗
Improved health outcomes	Reported health outcomes in communities serviced by participating and non-participating pharmacies	NA	NA	✗
Increased access to professional development/ training	No. of professional development/ training opportunities attended by staff at participating and non-participating pharmacies	NA	NA	✗
Aboriginal and Torres Strait Islander Specific Programs				
Increased participation in pharmacy workforce	No. of scholars/ trainees that go on to or continue to work in the pharmacy workforce after the Program ended	NA	NA	✗
Improved capability of Indigenous Health Services	Reports from participating and non-participating Indigenous Health Services on their services and offerings	NA	NA	✗
	Reports from community members on experiences with participating and non-participating Indigenous Health Services	NA	NA	✗

Increased access to pharmacy services	No. of prescriptions for Aboriginal and Torres Strait Islander people in participating and non-participating areas	NA	NA	✕
Improved health outcomes	Reported health outcomes in communities serviced by a participating Indigenous Health service	NA	NA	✕

✓ Available   ✓ Partially/Proxy Available   ✕ Unavailable

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