

New Models of Primary and Community Care to meet the challenges of chronic disease prevention and management: a discussion paper for NHHRC

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Recommendations

An incremental approach is unlikely to be able to reconfigure primary health care to cope with the sort of challenges to the primary health care system that are outlined below. An adaptation of Wagner's Chronic Illness Model provides a framework for an effective and accessible national primary health care system. Key elements of the proposed model are already in place in other health services and there is evidence that this will provide a more effective way of ensuring access, quality and equity of care for all people in Australia.

The key elements of the recommended model are:

1. Self-management support and improving health literacy
2. Redesign of the primary health care delivery system
3. Shared information systems
4. Decision support systems
5. Engaging the community
6. Reengineering the organisation of health care
7. Modification of primary care organisations
8. Integrated primary health care services
9. Monitoring performance and accountability

However achieving change is difficult and will require key reforms including:-

1. Bundling of core funding from both levels of government to allow more comprehensive and integrated set of primary health care services and programs.
2. Encourage enrollment of patients with their primary care teams to enhance access to multidisciplinary preventive and chronic disease care and make primary care organizations accountable for this.
3. Expansion of workforce capacity by increasing the numbers of existing health professionals being trained, facilitating teamwork, a more flexible use of skills of existing health workers and development of the role of new categories of health workers (such as health assistants in primary care).
4. Expanding the focus, geographic size and representation of Divisions of General Practice to a wider remit on primary health care.
5. Integration of the new Divisions of General Practice/Primary Health Care with local publicly health services making them responsible for all primary health care services being delivered across a geographic area.
6. Commission and disseminate information systems that enable communication, decision support, information sharing, audit and teamwork across multiple providers who are not co-located and with hospital care.
7. Monitoring of a key set of performance indicators relevant to the functions and outcomes achievable in primary health care.

These recommendations are controversial and need to be widely debated. Ultimately these are likely to be judged by how well they will improve access and quality of care, the working conditions for health professionals and accountability to government.

Background and rationale for a new model for PHC to support prevention and management of chronic disease

Challenges

Primary health care faces a number of challenges related to the rise of chronic illness, demographic changes, cost of health care, erosion of traditional relationships between families and GPs and rising patient expectations.

There has been a rise in the prevalence of chronic disease over the past 30 years. For example approximately 55% of people aged 65-84 years have five or more long-term conditions¹. These problems cannot be managed effectively by specialist services working in isolation from generalist primary health care services based in the community². Thus chronic conditions comprise an increasing proportion of the workload of primary health care. By 2003/4, chronic conditions had risen to 51% of general practice encounters³.

Effective management of chronic conditions requires a range of disciplines to be involved (both directly and indirectly) in the delivery of care to comprehensively address patient needs. This presents a challenge to care which has traditionally been episodic, based on separate encounters with a number of independent providers. This episodic fragmented care is associated with poor communication between providers, which together with inconsistencies in approach and the complexity of the interaction leads to errors and duplication^{4 5 6}. This is further compounded by the reduced ability of the patient to effectively manage their own care due to the complexity of the care and the patients' journeys as they move from one provider or service to another.

Thus while multidisciplinary care teams are essential to the assessment and management of patients with chronic disease, these teams need to work together more effectively^{7 8}. In the current Australian context these teams are required to operate across service boundaries often hampered by differing organizational, financial, professional and team pressures. Studies of collaboration between GPs and other health services have found that it is possible, but not easy, and often falls short of expectations. A recent qualitative study examined the organization of care for chronic disease in Australian general practice⁹. While all health care professionals recognised that communication was an integral part of forming good working relationships, this was often inadequate.

The demographic shift towards an older population (13.1% aged 65 years and over in 2005) has contributed not only to a change in the prevalence of chronic disease but also an increased demand on health services. This is because older patients with multiple chronic long term conditions are more complex to manage and require more time from providers. This has exacerbated the pressures that have arisen from health professional workforce shortages¹⁰.

General social changes including the commodification of health care, widespread access to web based information and technology, increased medical workforce participation by women, increased mobility of the community and longer working hours have put greater pressure on the care relationship between families and their family practitioner. It is more difficult for a GP to be available at all the times when families might need care. The informal linkage between a GP and their practice population has become more tenuous as personal continuity has decreased as has the capacity to make best use of new internet based services. This and other factors (including safety and concern about the impact of doctoring on doctors health) have meant that GPs for their part have become less willing to work extremely long hours providing care or to make home visits¹¹.

Because of its importance as the entry point and source of continuing care, challenges to the quality of care provided by primary health care have implications for the rest of the health system especially hospitals. Effective primary health care is critical to the performance of acute care both in terms of quality and safety and in managing scarce health care resources.

In an international study of 11 Western industrialised nations Starfield et al demonstrated that the strength of primary health care is associated with health outcomes for the population and to the containment of growth in overall health system costs¹². Health systems that include strong primary medical care are more efficient and have lower rates of hospitalisation. Continuity of care with the same primary care provider or service has been associated with lower use of hospitals and greater patient satisfaction with all care^{13 14}.

Impact of these on health

The emergence of these challenges has occurred at the same time as evidence of significant gaps in quality of care and health outcomes for Australians.

Quality of care (QoC) for a number of long term conditions is suboptimal when compared with standards based on evidence based guidelines. For example despite some improvements, less than half of patients with type 2 diabetes in general practice have levels of glycated haemoglobin (HbA_{1c}), blood pressure, and lipids that met current target levels^{15 16}. 30% of patients with hypertension are treated to target and less than 20% of patients with cardiovascular disease achieve optimal levels of lipids¹⁷.

There are similar concerns about the QoC for patients with chronic respiratory disease and depression. Current financing arrangements through fee for service do not appear to be successful in promoting improved quality of care. For example only 5% of eligible people with asthma have received the 3+ care plan¹⁸. Less than a quarter of patients with more severe anxiety or depression receive pharmacological or specific evidence-based non-pharmacological treatments.¹⁹

Preventive care is also suboptimal both in relation to interventions to reduce the risk of disease and screening to detect it early. For example few primary health care encounters in Australia involve risk-factor assessment and intervention, signifying an important gap between evidence and practice. A survey of general practitioners in New South Wales reported that only 34% provide smoking cessation advice during every consultation with a smoker²⁰. In 2005-6, only one in five problems in general practice were managed using non-pharmaceutical interventions and out of these interventions only 1.2% were for smoking, 9% for nutrition/weight, 0.7% for alcohol, and 2.9% were for exercise counselling²¹.

There are many practical obstacles to matching the recommendations of evidence-based guidelines with the day-to-day realities of primary health care and, of course, these gaps in the quality of care and preventive care are not the only reason for poor health outcomes. Social trends in urbanization, employment, transport and living conditions all contribute. While life expectancy and mortality rates from cardiovascular disease, diabetes and chronic renal disease, the burden of disease from these conditions remains high. Combinations of these conditions greatly increase risk of disability and death.

Perhaps most disturbing are the continuing disparities in both quality of care and health outcomes on the basis of ethnicity and socioeconomic status in Australia. In primary health care there is evidence of disparities in length of consultations and access to preventive care by low income people²². Indigenous Australians continue to experience poor access to health care despite higher levels of morbidity and a shockingly gap in life expectancy when compared with other Australians^{23 24}. The reasons for these disparities are complex. However primary health care seems to be failing in its promise to address these through a comprehensive range preventive, treatment, and rehabilitation services, covering mental as well as physical health, chronic as well as acute conditions²⁵.

Capacity to respond

The capacity of health care providers and their patients to respond to these challenges is limited by a number of factors including patient factors, accessibility, funding and organization of health care.

There are a number of patient factors which may facilitate or act as barriers to the prevention and early management of health problems and the maintenance of effective management strategies. These include the skills and health literacy of patients both to use the health system most effectively and to self manage their conditions especially the lifestyle risk factors associated with chronic long term conditions²⁶. In order to participate effectively in their own care, they need information about safety and effectiveness of treatments and skills in self management²⁷. Support for the development of these skills needs to be integrated into the work of primary health care²⁸. However this is confounded by the fragmentation of primary health care services and their funding²⁹.

Case study:

John is a patient in his late 40s who has presented to the local hospital emergency department with asthma on three occasions over the past 12 months. He continues to smoke (although he has tried to cut down). He has been given preventer and reliever medications but does not take these regularly. He sees one of 2 or 3 GPs when he has had an attack but has not presented for the 3+ visits suggested by his GP. He has a management plan (which he shows to his pharmacist) but does not really follow this. He attended for a health check visit after being invited by one of his GPs and had his BP and lipids checked (which were within normal limits) but has not changed his lifestyle.

Comment

This case study illustrates the problems in trying to provide consistent high quality care in the context of poor patient knowledge and skill in self management and a fragmented health care system. It is easy in this context to blame the patient but this ignores the fact that his behaviour is to some extent reinforced by the pattern of his care.

Although 85% of the population attend a GP at least once a year and on average each patient who attends a GP does so approximately 6.5 times per annum³⁰, access to health services and programs is constrained by the complexity of services, cost, availability and appropriateness to the needs of specific groups³¹.

Case study:

Mary is a 55 year old carer for her 84 year old mother with dementia. She receives some support from her GP and aged care services. However this is difficult to coordinate. Home care services are managed by a sub-contractor whose staff change regularly. There is similar turn-over in the nurses who visit from the local community health service and the GP finds it difficult to make home visits. This makes it difficult for Mary to rely on them coming every day while she is at work and to ensure that messages are communicated effectively (eg about changes to diet or medications). Duplication and miscommunication occurred across the provider. As a result Mary has fallen when trying to go to the bathroom unaided and had to be admitted to hospital.

Comment

This illustrates the difficulty which our fragmented system of services face in maintaining older patients in the community and the tendency for this to rapidly reach a crisis situation which places further pressures on the hospital system.

This is in turn limited by the available workforce and training for that workforce, especially in rural and outer urban areas and differences between the States and Territories in the regulatory frameworks governing training and employment in primary health care^{32 33}.

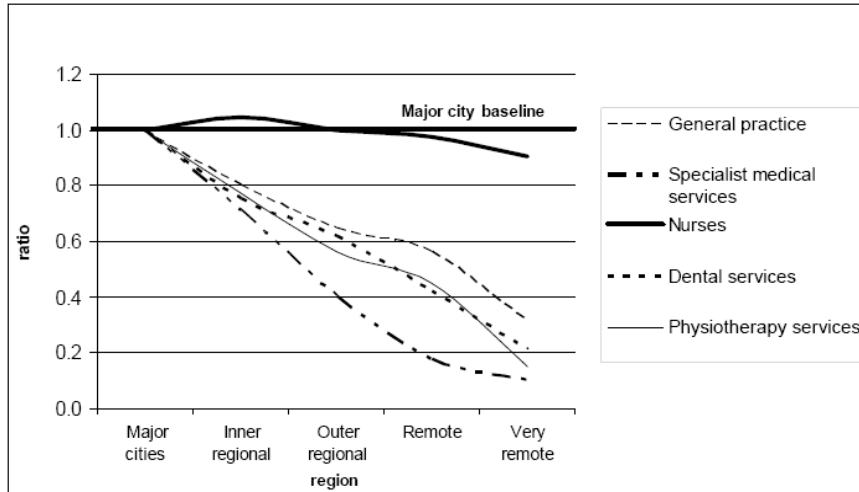


Figure 1 Practitioner to population ratios relative to major city levels³³

There are also important constraints operating on primary health care providers. Funding through Medicare mostly rewards episodic care and is largely uncapped. Funding and services through the state and territory community based services are often rationed by long waiting times or eligibility criteria. Providers operate independently with poor continuity and coordination across or even within services can be difficult³⁴. Communication between GPs and other health professionals is facilitated primarily through information exchanged via letters. However, a significant proportion of both GPs and health professionals (allied health and medical specialists) have found the content and the timeliness of information exchanged to be lacking³⁵. Moreover inadequate staffing and lack of feedback after referral inhibits collaboration³⁶. These communication difficulties are particularly marked between private providers funded through Medicare and state health services³⁷. Mechanisms for care coordination often amount to little more than “paper shuffling”³⁸. Some categories of providers rarely communicate directly – exacerbating lack of trust and poor understanding of each other’s roles and needs.

Case study:

Richard is a 60 year old man who is overweight and suffers from osteoarthritis, hypertension and ischaemic heart disease. Although his GP has developed a care plan and referred him to a dietician and physiotherapist neither feel engaged in his care and all have mixed feelings about the team care arrangement feeling it was “a hoop through which clinicians had to jump” as it did not really facilitate direct communication. None of these providers had ever spoken directly with each other – relying on paper communication only. Richard is unsure of the reason that he had been referred to the dietician and says he feels a little bit like it is just “pass the parcel” and that he has been getting slightly conflicting advice from his providers.

Comment

While care plans are an important potential mechanism to improve systematic of care and access to allied health has been welcomed by GPs, they often fail to improve communication and coordination between providers. Indirect communication is most effective where it builds on an established relationship between providers and where the patient is an informed participant.

In Australia primary health care services often work in a poorly coordinated way with each other and other parts of the health care system³⁹. A variety of strategies have been tried to improve the integration of care between primary health care and hospitals. These include initiatives to shift care to the most appropriate setting (such as through hospital in the home programs) and improve the transition between acute and primary health care. However responsibility for communication and continuity of care remain confused^{40 41}. As a result duplication and errors due inconsistencies in care are common and opportunities to prevent representation or readmission to hospital are lost⁴².

Ingredients for a new model for Primary Health Care in Australia

The chronic illness model developed by Wagner et al⁴³ has been endorsed by WHO as a framework for innovation in the management of chronic illness⁴⁴. This comprises 6 elements (Figure 2). These elements has been demonstrated to facilitate improved outcomes for people with chronic illness and improved preventive care^{45 46 47}.

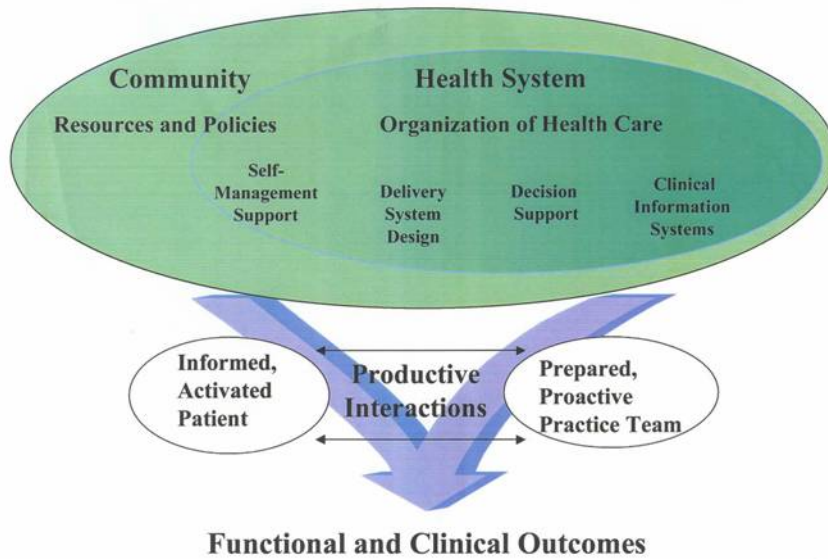


Figure 2: Chronic Illness Model⁴⁸.

Using this as a framework, we have developed a new model of primary health care in Australia which addresses some of the key challenges. (Figure 3)

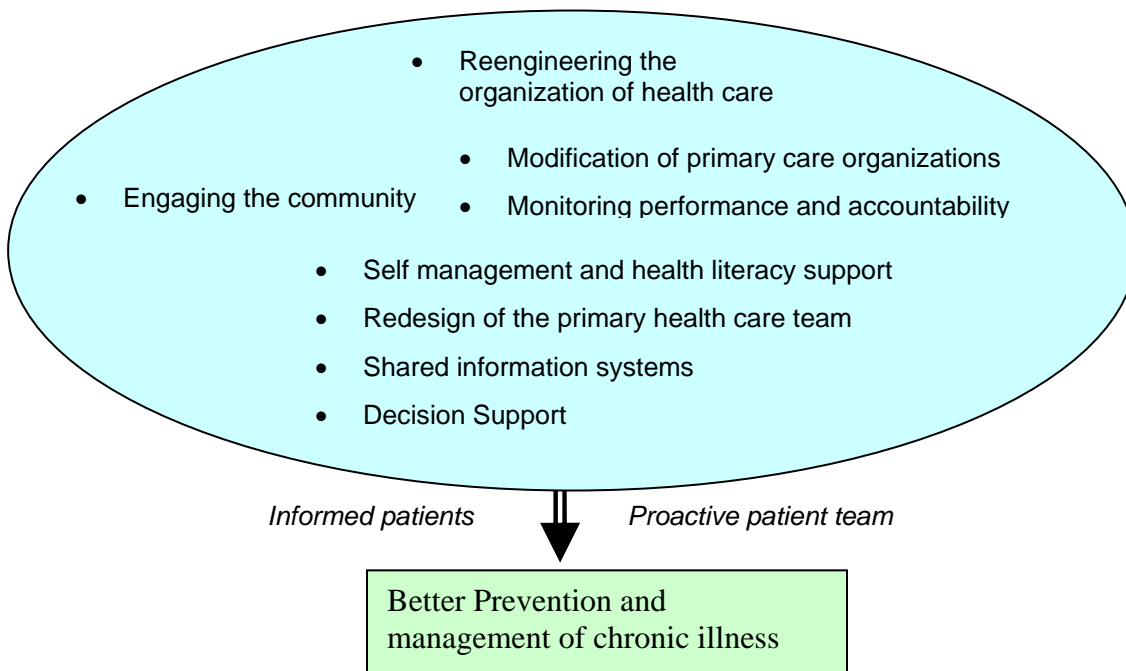


Figure 3: Model for Primary and Community Care to meet the challenges of chronic disease prevention and management

Self-management Support and improving Health Literacy

Patients with chronic long term conditions require the knowledge and skills to enable them to more effectively negotiate the health system, manage their own conditions and adhere to evidence based goals for their care. This can be provided through a wide variety of different self-management support programs ranging from disease specific to more generic programs covering a range of chronic illnesses. The programs can be delivered in group or individual sessions and provided by health professionals or peers with chronic illness themselves. These sorts of programs have been demonstrated to improve patient self efficacy and health outcomes in a variety of chronic illness^{49 50 51}.

Such programs need to be strongly linked with general practice and community health services⁵² and sustained as a core and measureable activity of primary health care services over time⁵³. This lack of integration with the patient's existing health provision has been identified as a major failing of many self management programs in Australia.

Redesign of the Primary Health Care Delivery System

Wagner describes patient care teams as diverse healthcare professionals who communicate regularly about the care of a defined group of patients and participate in that care on a continuing basis⁷. Effective teamwork is characterised by effective leadership, a shared sense of responsibility and common goals, cooperation, trust and respect, use of the skills of all team members and clear roles and responsibilities^{54 55}. This may require a broader skill-mix through increasing the range of staff in general practice/primary health care services as well as enhancing their roles or skills and capacity to work across professional and organisational divides⁵⁶. Such teams can most effectively manage patients with chronic illness and deliver preventive interventions (especially behavioural interventions)⁵⁷. In a study in 97 general practices across Australia better team climate predicted better staff job satisfaction and better patients' assessment of the quality of care received from their practice⁵⁸.

It is essential that new health professional roles are introduced into primary health care and that existing professional groups are supported to operate flexibly and optimally.

The first step is to extend the capacity of the team by introducing new health professionals within primary care services such as health assistants (HA) to work with GPs and practice nurses in carrying out some of the more routinized roles required and to provide a link between the service and the community or target groups⁵⁹. This role is already well established in Aboriginal Medical Services but is yet to be implemented in other primary health care services⁶⁰. Working in tandem with a GP and/or practice nurse HAs can carry out elements of recall, monitoring, education, arranging referral, follow up as well as administrative roles such as data collection and recording⁶¹. A trial of health assistants in general practice is currently being conducted by GP Partners in Brisbane. These assistants are trained to carry out administrative and clinical assisting duties specific to primary health care⁶². The first medical assisting graduates are now employed in general practice in Brisbane, and the course is being prepared for nationwide delivery.



Figure 4: Medical Assistants Program GP Partners 2008

There are two aspects to ensuring a flexible and adaptable workforce: firstly ensuring that professionals are not hampered by medico-legal impediments that could prevent skilled staff undertaking health care activity and, secondly, that funding mechanism support safe and effective health care delivery.

There also needs to be greater flexibility and development in the roles of team members with extension of the roles of practice and community nurses, nurse practitioners, allied health providers and pharmacists in the care of patients with chronic illness^{63 64 65}. This needs to be done in the most cost effective way within the context of an integrated primary health care team which provides some gate keeping as a restraint on costs and to ensure coordination of each person's care.

Teamwork among this extended primary health care team needs to be developed. Co-location within one setting may help but is not sufficient to create effective teamwork. This requires support to create a team with a shared vision and goals, a desire for continuous improvement and innovation, effective communication and respect for each other^{66 55}. Other characteristics of successful teamwork relationships include: trust, diversity, mindfulness, inter-relatedness and varied interaction⁶⁷. Strategies for achieving this need to be tailored to differing capacities, priorities and needs of primary health care services.

Case study:

The Homewood Practice has 5 doctors, 2 nurses, 4 administrative staff including a practice manager and part time visiting dietician and podiatrist.. There is strong leadership by the principle GP and practice manager. This encourages teamwork by ensuring that staff roles are defined and the value of each member's work is recognized. There are procedures for communication including regular team and clinical meetings with action plans which are minuted. The acknowledged benefits of teamwork include staff stability and happiness leading to greater longevity of staff and less absenteeism. The principle of this practice has a passion for quality improvement and listens to the staff so she can take on board the ongoing changes required. One of the staff describes it as: *"a place where everybody feels motivated, accepted as an important member of the team, where issues can be brought up"*.
Comment: This demonstrates the importance of the "soft" elements important to teamwork in addition to the structural and financing arrangements

The creation of integrated primary health care services may go some way towards achieving this. These aim to enhance the capacity of the primary and community care sector to provide equitable, easily accessible and comprehensive care by amalgamating general practice and state government funded community health services in local communities in a single location, that are responsive to the needs of the individual patient and the community⁶⁸. However this will not be a solution to the fragmentation of primary health care unless it can be scalable to provide coverage for more than a small proportion of the population. The Australian Association of Academic General Practice has described the "beacon" role that such services need to play in transforming the rest of primary health care within their locality⁶⁹.

No matter where the boundary of an integrated primary health care service is set, there will always also need to be more effective teamwork across services including with acute care services and specialized services in the community (such as aged care and mental health). This requires providers to understand each other's roles through interdisciplinary education at all levels (prevocational, vocational and continuing), agreed guidelines and procedures, effective methods for direct communication at least intermittently about patients and feedback to each other.

Teamwork needs to be facilitated both within and between primary health care services. This may be facilitated within the primary care team by identified coordinators of care innovation (this may be a GP, practice nurse, allied health provider or practice manager). Teamwork may also be facilitated externally from primary care organizations (such as Primary Care Trusts in the UK) or

through network such as the Collaboratives. This may link to the role that primary care organizations may have in brokering or commissioning new services and programs such as group prevention or self management support programs and services.

Case study:

Macarthur Division of General Practice in conjunction with the Campbelltown City Council, Macarthur Health Service and the University of Wollongong, has been conducting a Healthy Eating, Activity and Lifestyle (HEAL) Program. This aims to provide individual assessment and a group program for physical activity and healthy eating for people with, or at risk of, chronic illness. Following referral by GPs, patients undergo an exercise assessment conducted by an exercise physiologist to determine their exercise capacity. From these results an exercise program is tailored to suit each individual's needs and abilities. The groups are run weekly for 8 weeks, comprising education and a group physical activity session. Each group has 10 participants to ensure a level of personalised assistance during each session. Final year Exercise Physiology students from the University of Wollongong assist in the program.

Comment:

This program is an example of the sort of programs which a number of Divisions of General Practice have established providing allied health, lifestyle and self management support which are well integrated with general practice and with state and local services.

Between primary health care and acute care services there needs to be new programs to not only shift care from acute and institutional settings to the community but also to prevent or delay admission by early intervention. The latter require flexibility and a capacity to mobilize resources and services quickly. This inverts the current priority which waits until patients have presented (sometimes repeatedly) to try to prevent hospitalization or reduce bed days. A number of shared care initiatives between GPs and specialty services have led to a reduction in hospital admissions especially of older patients^{70 71}.

A core list of primary care preventable Ambulatory Care Sensitive Conditions requiring hospital admission provides an indication of opportunities early intervention and prevention in primary health care⁷². Such interventions are particularly likely to be successful in disadvantaged communities⁷³.

Table 1 Role of PHC in preventing core Ambulatory Care Sensitive Conditions hospitalizations⁷²

Type of intervention	Infectious diseases	Non infectious diseases
1. Primary Prevention	Immunisable diseases (eg influenza, pneumococcal)	Hypertensive heart disease
2. Early diagnosis and treatment	Rheumatic fever Congenital syphilis Tuberculosis Peritonsillar abscess Pneumonia Appendicitis with complications Acute pyelonephritis Pelvic inflammatory disease	Diabetes mellitus Disorders of hydro-electrolyte metabolism Hypertensive heart disease Heart Failure Bleeding or perforating ulcer
3. Ongoing management		Diabetes mellitus Hypertensive heart disease Heart Failure Bleeding or perforating ulcers

A Shared Information System

The development of a shared information system has been an elusive goal for the Australian health system. Effective, safe and securing sharing of health information between primary health

care professionals and organisations and between primary health care and the wider health care sector will:

- Improve the safety and quality of care delivered at the time of care delivery and improve patient health outcomes through clinical decision support and enhanced communication;
- Improve individual patient care and practice processes through continuous improvement of care, including diagnostic accuracy and appropriate treatment;
- Improve access to effective health care by reducing barriers created by location, disability or other factors;
- Enhance communication with, and education of, patients and their carers, strengthening participation in decision making; and
- Identify personal training needs and delivering training for professional and inter-professional development, facilitate research and inform national policy.

Electronic information systems are the backbone of 21st century health care. While almost 90% of general practitioners are using computers for clinical activity⁷⁴, many primary health care practitioners and many consultant medical specialists lack suitable systems. Outreach workers need access to mobile technology such as the Royal District Nursing Service's PDA model, private practitioners need secure standards based 'fit for purpose' software that ensures effective engagement and all practitioners need safe secure messaging and interoperable systems and patients and practitioners deserve access to a reputable knowledgebase of health information.

Information must be extractable to support appropriate guidelines use, clinical audit and performance monitoring. The lack of compatibility of systems and lack of fast access to secure web databases have impeded development of even the most basic shared records. While the telephone is still an important personal mechanism, a number of IM/IT strategies have been implemented in Australia to facilitate better communication between general practice and hospitals⁷⁵.

It is critical that those most in need of care are managed well. Transferring information between acute and primary care sectors must be a priority. Much work has been done to identify the minimum requirements from a content and a technical perspective: SIGN⁷⁶, NeHTA⁷⁷ and GPDV⁷⁸, for example, have identified minimum criteria. Despite this, there are few discharge summaries being shared in a timely manner.

Case study:

The Illawarra Division of General Practice in consultation with project stakeholders designed computerised medication charts for residential aged care facility residents. They subsequently developed software which enabled the production of medication charts from the clinical information management system *Profile*. Medical record systems in GP's surgeries were linked to those within the nursing homes by broadband, thus allowing the GPs remote access to each resident's medication chart. The system is relatively inexpensive and has greatly facilitated communication and care being provided by the GPs to residents in the nursing homes. It has since been extended to other Divisions.

Comment: This illustrates the importance of seamless communication and how barriers can be overcome where there is a commitment on behalf of all those involved.

Decision Support systems

There are an increasing number of evidence based guidelines for use in primary health care. These can help ensure that care across providers is consistent and directed towards achieving health outcomes^{79 80}. They can provide an important basis for agreement on the plan of care for patients across the primary health care team and for shared care with acute and specialist services. However the traditional methods of their implementation fall a long way short of engaging primary health care providers or consumers^{81 82}. The South Australian HealthConnect care planning trial is a positive and promising step forward using guidelines and technology as the integrative components to bring teams together⁸³.

Support for decisions is needed at the point at which care is provided and should also be incorporated into patient education and patient records^{84 85 86}. Such systems have been demonstrated to improve quality of care and patient health outcomes in preventing and managing chronic illness^{87 88 89}. However this does not mean simply providing more alerts within medical records⁹⁰. An integrated electronic system is required which provides relevant, accessible guidance to both providers and patients and which can be the basis for clinical audit and monitoring to improve quality of care⁹¹. To be effective such audit needs to involve group discussion of the audit results by the members of the primary health care team⁹². A long term strategy is needed to achieve a more coherent approach⁹³.

Engaging the Community

While local government, non government and community organizations are very actively involved in providing care for the elderly and in children's services, these are often only weakly linked with primary health care services especially general practice. Partnerships with this sector are potentially very useful both in the provision of preventive and chronic disease services which are appropriate for the needs of the community and specific groups such as CALD groups. Formalisation of these partnerships is best achieved at the level of primary care organizations.

Case study

The Mid North Coast (NSW) Division of General Practice was a formal partner of the Galambila Aboriginal Health Partnership (Coffs Coast), a cooperative framework established by a local working of interested stakeholders who were responsible for the establishment of the Galambila Aboriginal Health Clinic at Coffs Harbour in October, 1998. The impact of the collaborative partnership has seen the growth the Galambila Aboriginal Health clinic from operating 3 half days per week and averaging about 250 patients to now operating on a full time basis, with average patient throughput of over 650 presentations per month. The clinic now provides Aboriginal people access to a wider range of multidisciplinary GP, specialist and allied health services. The clinic assists many clients with referral to other specialist and allied health services and provides patient transport to the clinic and specialist services⁹⁴.

Comment

This case study illustrates the potential of primary care organizations to form long term partnerships with community organizations, as well as with State and Local governments and non government organizations, in developing services including those targeting disadvantaged groups.

Reengineering the organization of health care

Changes need to occur within a health care organizational framework that facilitates optimal care. This framework must include consideration of structure, funding and accountability.

At the level of primary care organisations (such as Divisions of General Practice) there needs to be greater integration in the planning of health services and programs, coordination between providers (eg through common guidelines, assessment and care planning mechanisms), and in the delivery of second tier services and programs which support care or prevention (eg group education or allied health service referral programs). This can be facilitated by wider representation on the management boards, community-ownership and a broadening of focus – so that Divisions of General Practice become Divisions of Primary Health Care.

Case study

Central Australia Division of Primary Health Care (CADPHC) provides services to members and stakeholders within the Central Australian region, extending as far North as Elliott, south to the Pitjantjatjara Lands in northern South Australia, west to the Ngaanyatjarra Lands in eastern Western Australia and east to the Queensland border (NT,WA, SA). The title of "Division of Primary Health Care" recognises the multidisciplinary ways of working in Central Australia. The

Division Board has representation from a number of member organisations and individual GPs, as well as a consumer representative. The CADPHC Mission is to lead change to improve Primary Health Care access and delivery in Central Australia through multidisciplinary teams and improved support to primary health care professionals.

Comment

There is a gradual widening of the focus of Divisions of General Practice. Widening of board representation to include not only other providers in general practice but also those outside general practice as well as consumers is critical to this process. This is important for the involvement of State-funded community health services, private allied health providers and non government organizations such as Aboriginal Community Controlled Health Services.

At the level of the primary health care facility, there is scope for greater integration to allow co-location of front line primary health care services and the formation of effective multidisciplinary primary care teams. This should include primary health care workers whether employed in private and public sectors or funded by Commonwealth or State governments. The establishment of the new primary health care “Superclinics” in addition to State and Territory initiatives may be a potential important step in this process. However, as noted above this should not be limited to co-location models as these will not be suited to all settings or types of practice and co-location itself does not guarantee effective integration of care.

Moreover, funding needs to encourage both integration and improved quality of care. There is currently fragmentation of funding between Commonwealth and the States and Territories and between different initiatives and funding mechanisms. Most of the existing funding mechanisms reward items or occasions of service. Relatively few mechanisms exist to reward quality of care, population coverage or equity of access, and these factors need to be addressed without further increasing the fragmentation and complexity which is already a serious problem for providers. There are currently 14 Health Assessment items, 8 care planning items and 20 case conferencing items as part of the Enhanced Primary Care Programs.

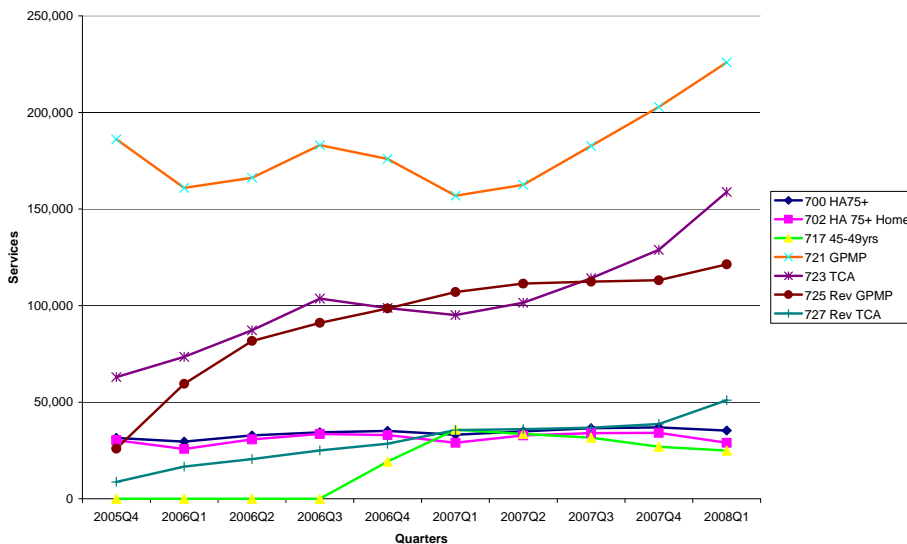


Figure 5: Selected Enhanced Primary Care Item Claims 4th Quarter 2005 to 1st Quarter 2008

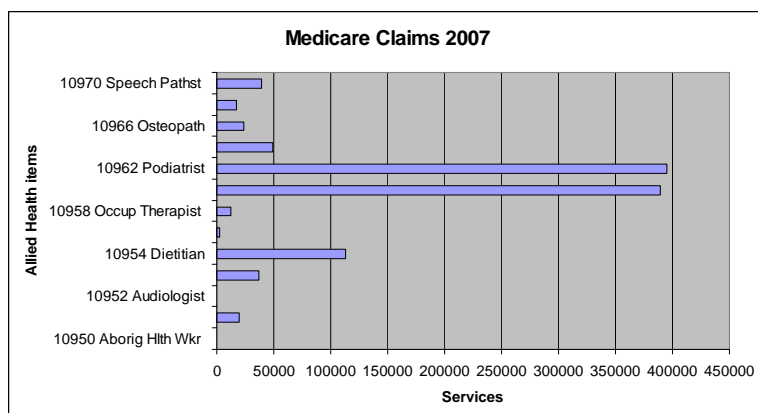


Figure 6 Allied Health Medicare claims by provider 2007

As a corollary to the funding, there needs to be greater accountability for QoC, reach and equity at least at the level of each primary care organization. This is not possible without having data available at this level and resources to influence the outcomes in each of these areas. Key requirements include a system of enrollment of consumers with a primary health care organization so as to determine which patients are in the denominator of performance measures, and suitable tools and training to allow effective and responsive analysis of data focused on quality improvement and health outcomes improvement. Patient enrollment could be flexible, for example, only applying to responsibility for chronic disease management and preventive care. This will also allow practices to know the population they are responsible for providing care to, and therefore assist in anticipatory care including recall^{95 96}. Unfortunately at present levels of informal registration with general practice are low and probably decreasing in Australia and overseas^{97 98}. Current clinical software used in general practice has rudimentary capacities. The Clinical Audit Tool software offers promise in this area⁹⁹.

Achieving change

Achieving change will be difficult. In the past incremental change has been introduced at both national and state levels. This has taken the form of new Medicare items such as those introduced as part of the Enhanced Primary Health Care Program for Health Assessments, Care Plans and Allied Health Care. Similarly at state and territory level there have been a number of initiatives to improve the care of patients in the community with chronic illnesses which present high demands on hospitals including mental illness, cardiac failure and chronic obstructive airways disease. These have often involved outreach nurses from hospitals working with general practice and community health services.

These have provided tangible benefits and outcomes. However this has often been at the cost of greater complexity of the system as a whole. Care plans are a poor mechanism for controlling access to allied and preventive health care¹⁰⁰. Outreach workers can help facilitate the transition from hospital but still rely on primary care to provide continuing health care. There is little capacity within the system to continue to extend these approaches to a greater number of conditions.

While change needs to be staged over a period of time, some fundamental building blocks need to be put in place to move the system towards a more integrated model.

1: Modification of Australia's publicly-funded primary care organisations

There needs to be a transition from our current Divisions of General Practice towards primary care organizations that are more broadly representative of all involved in Primary Health Care delivery. This transition has been achieved in the UK and NZ^{101 102}. Major barriers will likely include the professional autonomy of GPs, the private nature of many primary care services and

the organizational relationships of state funded community health services. However a single structure is needed representing general practice, other private providers, publicly-funded community health and consumers/community members. These need to be funded or closely linked to the local area or district health service boards (as in New Zealand) to ensure accountability.

These primary care organisations need to be accountable for chronic disease management and prevention. This can only be partially achieved by having geographic boundaries. They need the responsibility and authority to plan service development, ensure access to primary medical care especially in underserved areas, govern access to allied health and other tier 2 services, and provide recall and outreach to patients for primary, secondary and tertiary preventive activities. This can be achieved, as has been the case in New Zealand, by asking consumers to register with these primary care organisations through their usual provider in order to achieve access to allied health and preventive programs^{103 104}.

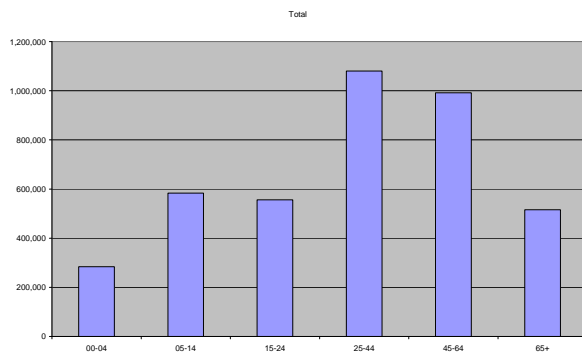


Figure 7: Enrolments in Primary Health Care New Zealand 2008

Funding can then be provided through these structures (as is already happening for the diabetes prevention program through Australia's Divisions of General Practice). This avoids the inequity of directly funding some primary care services and not others and allows additional funding to be specifically targeted where appropriate to disadvantaged groups.

2: Integrated Primary Health Care Services

Integrated primary health care services already exist for a fraction of Australia's population. This model risks creating a kind of local inequity where additional resources are put into some facilities while patients attending other services do not have access to these benefits.

The development of co-located and virtual patient teams requires ongoing facilitation. Existing integrated services can provide a local model for a variety of local adaptations which may include a mix of private and public existing providers (eg general practice, pharmacy, allied health, community health, indigenous health, non government organizations). These may be funded from a variety of sources. However these need to be bundled at least at the level of the primary care organisation.

3: Monitoring performance and accountability

Key performance indicators are required for this system of care and include accessibility, comprehensiveness, continuity and coordination, health service outcomes, and health outcomes.

Table 2: Examples of performance indicators¹⁰⁵

	Key performance question	Indicators	Source
Accessibility	Is the level of use of PHC proportional to need for different groups (chronic disease, age, gender, ethnicity, SES)?	Equity of distribution of:- <ul style="list-style-type: none"> • Enrollment • Use of preventive care (health checks, immunization) • Use of allied health, patient self management support 	Primary Care Organisation
	Is cost or availability a barrier to use of PHC?	Patient assessment of accessibility of PHC weighted according to patient characteristics	Patient survey
Comprehensiveness	Are PHC services provided for a comprehensive range of patients?	Provision of services for those with <ul style="list-style-type: none"> • mental health problems • drug and alcohol problems • intellectual disability 	Primary Care Organisation
	Is a comprehensive range of PHC services provided?	Provision of Self Management Support programs for those with long term illness	Primary Care Organisation
Continuity	Are there effective means of communication?	Frequency of direct (face to face or phone) communication between PHC providers Electronic communication between PHC providers	Provider survey
	Is duplication minimized?	Shared vs. duplicate assessments	Provider survey
	Are there errors due to poor continuity?	Inappropriate medication changes or omissions following transfer or referral	Provider survey
Coordination	Are there effective means of coordination	Shared patient held care plans with agreed goals (provider and patient)	Provider survey
	Is there effective teamwork?	Team-climate Team roles	Provider survey
	Are there errors due to poor coordination of care?	Adverse events arising because of inconsistent care	Adverse event notifications
Acceptability	Are services acceptable and appropriate to needs of disadvantaged groups	Patient assessment of accessibility and patient-centredness of care.	Consumer survey
Effectiveness	Are there improvements in the number of hospitalizations or ED presentations?	Primary Care Preventable Admissions and ED presentations	Hospital data
	Are intermediate health outcomes improved?	Change in quality of care indicators for specific chronic conditions (eg BP, weight, HbA1c)	Medical record audit
Safety	Are errors due to miscommunication or role confusion minimized?	Reported adverse events from primary care following hospitalization	Provider survey

Obviously it is not necessary for these to be collected continuously but rather periodically at the level of the primary care organisation.

Conclusions

In Australia we have seen a large number of new developments in primary health care over the past two decades. Divisions of General Practice were established in the early 1990s and they have expanded their focus. However most are not yet integrated primary care organizations which provide a comprehensive range of services and programs and are accountable for the health of their populations. The Australian Government's enhanced primary care program has provided incentives for team care and allied health provision within the framework of Australia's fee for service model of primary care. State and Territory initiatives such as HealthOne Centres in NSW and the national Multi-purpose Centres and "Super-Clinics" are being developed with the aim of delivering a more integrated service.

An incremental approach is unlikely to be able to reconfigure primary health care to cope with the sort of challenges to the primary health care system that have been outlined. Wagner's Chronic Illness Model provides a framework of an effective and accessible primary health care system. Key elements of that model are already in place overseas and there is evidence that it can provide a more effective way of ensuring access, quality and equity of care.

However achieving change is difficult requiring key reforms including:-

1. Bundling of core funding from both levels of government to allow more comprehensive and integrated set of primary health care services and programs.
2. Encourage enrollment of patients with their primary care teams to enhance access to multidisciplinary preventive and chronic disease care and make primary care organizations accountable for this.
3. Expansion of workforce capacity by increasing the numbers of existing health professionals being trained, facilitating teamwork, a more flexible use of skills of existing health workers and development of the role of new categories of health workers (such as health assistants in primary care).
4. Expanding the focus, geographic size and representation of Divisions of General Practice to a wider remit on primary health care.
5. Integrate the new Divisions of General Practice/Primary Health Care with local publicly health services making them responsible for all primary health care services being delivered across a geographic area.
6. Commission and disseminate information systems that enable communication, decision support, information sharing, audit and teamwork across multiple providers who are not co-located and with hospital care.
7. Monitoring of a key set of performance indicators relevant to the functions and outcomes achievable in primary health care.

These recommendations are controversial and need to be widely debated. Ultimately these are likely to be judged by how well they will improve access and quality of care, the working conditions for health professionals and accountability to government.

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