Inquiry into Chronic Disease Prevention and Management in Primary Health Care

Submission by the Australian Primary Health Care Research Institute (APHCRI)

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This submission is in two parts; Relevant themes arising from commissioned research in the APHCRI Network; and Relevant research conducted by APHCRI@ANU. Key themes are identified to highlight important areas of interest impacting on chronic disease management approaches across the health system including; funding sources and mechanisms; health system structures; team based and coordinated care; vulnerable populations and consumer engagement practices.
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Inquiry into Chronic Disease Prevention and Management in Primary Health Care

Submission by the Australian Primary Health Care Institute (APHCRI)

Summary

The Australian Primary Health Care Research Institute (APHCRI) has received funding from the Commonwealth Government since 2003 to conduct and commission research. APCHRI funded research is competitive with research priorities being set in line with the National Primary Health Care Strategy (2010).

APHCRI’s mission is to maximise the health and well-being of the community by leading high quality, priority-driven research and supporting its uptake into primary health care policy, programs and services. APHCRI currently funds nine multi-institutional research collaborations; Centres of Research Excellence, several research streams and a research group based in the ANU Research School of Population Health known as APHCRI@ANU. Many of the priorities of the current research program are associated with chronic disease management.

Unless specifically commissioned to address particular questions it is unlikely that any one piece of APHCRI funded research will directly address the terms of reference raised by the committee. Similarly, much of the funded research is currently incomplete; however this submission identifies some key themes relevant to the questions posed by the committee, arising from both the funded research to date and through our research networks.

The submission is in two parts

Part 1 Relevant themes arising from commissioned research in the APHCRI Network

Part 2 Relevant research conducted by APHCRI@ANU.

The following key themes highlight important areas of interest impacting on chronic disease management approaches across the health system including; funding sources and mechanisms; health system structures; team based and co-ordinated care; vulnerable populations and consumer engagement practices.

Key themes emerging from APHCRI funded research and networks note that

- Evidence based clinical guidelines are helpful in chronic disease management but need to be applied within supportive health system contexts
- Blended payment systems provide greater flexibility to incentivise quality outcomes, holistic care and continuity of care
- Primary Health Care Organisations (such as PHNs) are well placed to develop and support systematic best practice in chronic disease prevention and management
- Private Health Insurers have a limited scope in terms of achieving comprehensive best practice at a population level, despite playing an important role for their members
- Innovative models that incentivise access, quality and efficiency in chronic disease prevention and management have been developed. Care co-ordination/ care pathways are important and cost effective models exist in some contexts
In general, involving consumers (or their representatives) and carers is beneficial for developing both holistic health services and self-management approaches.

Specific service models may need to be tailored for population subgroups including Indigenous and Vulnerable Australians with chronic diseases.

Key themes emerging from APHCRI@ANU research, note that the key elements of chronic illness include:

- Chronic Illness requires ongoing care to improve and stabilise the condition/s for the individual
- Some conditions and precursors to chronic illness can be prevented or delayed
- Addressing the social determinants of health ensures that the burden is not borne solely by individuals in the lowest socioeconomic quartile
- The experience of people with the condition and their carers can vary enormously
- The inherent variation present in chronic illness is amplified by comorbidity
- There is no single way to include all chronic illness events in neat bundles and deal with them as such, either in primary care or in other policy areas.

Key principles in the best practice management of chronic conditions include:

- Patient centred-care should be the standard approach for all processes
- Prevention is best achieved by population health measures and by ongoing programs for identification and advice to people at risk
- Following guidelines and applying co-ordination and continuity of care will ensure the most efficient and effective care and outcomes
- Fostering of health literacy and self-management is important for all conditions
- e-health promises a much more consistent approach to management, better co-ordination of care processes and events, better continuity of information between professionals and between patients and their care providers, and better patient awareness, which will lead to more informed decisions.

Any effective model for managing chronic illness needs to be sensitive to the variations in need for different people and to target interventions appropriately.

The cost-effectiveness of interventions to manage chronic illness also depends on targeting effective interventions to the patients who are most likely to benefit.

The health system misses opportunities to provide best practice care when there are no ‘drivers’ to encourage it [1].

The social and cultural elements that affect health for Indigenous people may also operate to affect the health of other populations and individuals, such as rural populations.

Nurses and allied health professionals can play important roles in health management, not simply as professionals who put in place the treatment recommendations of a medical practitioner, but as
independent professionals, and as members of multidisciplinary teams. The conditions under which these teams will work best include

- strong leadership
- clear practice guidelines
- good information sharing
- agreed workloads.
PART 1 APHCRI Network

Introduction
The Australian Primary Health Care Research Institute (APHCRI) was established at the Australian National University in 2003. APHCRI has received ongoing funding from the Commonwealth Government to commission research that reflects the changing Australian health care environment. The priorities for research investment are underpinned by the first National Primary Health Care Strategy (NPHCS, 2010).

APHCRI’s mission is to maximise the health and well-being of the community by leading high quality, priority-driven research and supporting its uptake into primary health care policy, programs and services. Maintaining APHCRI’s three goals,

1. To support priority-driven primary health care research
2. To increase the capacity to undertake primary health care research
3. To drive the implementation of research into primary health care policy and services

Many of the priorities of the current research program are associated with chronic disease management; in rural areas, for indigenous Australians and of specific conditions such as obesity. The research being conducted in primary health care system finance and practice organisation goes directly to the issues of more effective chronic disease management.

Although not all of the research is complete we have identified some key messages and illustrations that are relevant to the questions posed by the committee and have referenced the sources of further information. We believe this illustrates the importance and value of research that provides an evidence base for system reform and the need to continuously evaluate the way in which our health system operates.

Summary of Our Research Program
APHCRI Network research is competitive, commissioned research into primary health care that supports the National Primary Health Care Strategy Key Priority Areas.

APHCRI’s nine Centres of Research Excellence (CREs) are multi-institutional collaborations aimed at producing relevant research and enhancing PHC research capacity

- Centre of Excellence for accessible and equitable primary health care service provision in rural and remote Australia
- Centre of Research Excellence: Innovative Models Promoting Access-to-Care Transformation (IMPACT)
- Centre of Research Excellence for Prevention of Chronic Conditions in Rural & Remote Communities
- Centre of Research Excellence in Indigenous PHC Intervention in Chronic Disease
- Centre of Research Excellence in Primary Health Care Microsystems
- Centre of Research Excellence in Urban Aboriginal Child Health
- Research Excellence in Finance and Economics- Primary Health Care (REFinE PHC)
- The Centre for Obesity Management and Prevention Research Excellence in Primary Health Care (COMPaRE-PHC)
- The Centre of Research Excellence in Primary Oral Health Care
Additional research funding has been allocated to the following nonCRE research streams.

**The National Lead Clinicians Group (Transitions of care)** research program explored improvement in patient safety during transitions of care using three related issues of clinical handover/transitions of care. Two projects were funded and completed in July 2014.

**Targeted programs of research** are prescribed by the Australian Government relating to National areas of need and interest at given times. The 2014 programs were:
- Sub-acute Care and Primary Health Care
- Integrated Primary Health Care Centres.

**The Tasmanian Sub acute pathways** project has identified current pathways and barriers, gaps and system inefficiencies, and identified practical strategies to address these to improve post-hospital sub-acute care in terms of health outcomes, patient experiences and efficiency of service utilisation.

**APHCRI@ANU research program** whose key focus is understanding variation in health care, with four research stream areas:
1. The nature and distribution of primary health care related variations
2. The causes of variations in primary health care needs, access, care and outcomes
3. How to address variations in primary health care needs, access, care and outcomes through innovations in policy and practice
4. How to measure and monitor variations in needs, access, care and outcomes over time.

**The National Centre for Geographic Resource Analysis in Primary Health Care (GRAPHC)** has been created within APHCRI to promote and facilitate the use of geographic information systems (GIS) to inform locally relevant and equitable solutions for targeting health resources and services in Australia. GRAPHC services and products are utilised across the APHCRI Network and APHCRI@ANU research programs.

Part 2 of this submission details the spectrum of relevant research undertaken by APHCRI@ANU.

A summary of the full research program is at Attachment 1.

**Key Learning with regard to the Inquiry**

Unless specifically commissioned to address particular questions it is unlikely that any one piece of APHCRI funded research will directly address the questions raised by the committee. Given this we have attempted to synthesise the key findings from the broad range of research and advice from our extensive network of national and overseas collaborators (with some applicability to the Australian context). These key learning points, addressed below, are described under the broad headings of

- Health and Care System characteristics (Terms of Reference items 1-4)
- Chronic disease management models (Terms of Reference items 5-8)
- Indigenous specific models.
Health and Care System Characteristics

a) Evidenced based guidelines

Evidenced based guidelines for best practice in both primary and secondary prevention as well as care management have been developed for all the major chronic conditions. These cover the roles and tasks of primary health care professionals, specialists and consumer self-management. Review of the guidelines is continuous and consensus has largely been reached within the professions.

Process and outcome indicators have been developed to measure adherence to the guidelines and the impact on the health and well-being of individuals.

The measure of best practice in using these guidelines are those health systems that

- Identify people with the condition through local, regional and national registers
- Establish and maintain continuity of the relationship between primary health care providers and individuals
- Continually record and monitor information about the actions of service providers (compliance) and the impact on key clinical indicators for the individuals
- Establish and maintain information systems that assist in sharing information between health service providers
- Provide incentives for health service providers to adhere to guidelines or achieve clinical indicator targets for patient groups
- Focus on supporting self-care and management through education and other enabling strategies at the individual and population level.

The ability of people and health service providers to comply with best practice guideline is not the same for all population groups. Specifically tailored initiatives are required to resource providers and support individuals/communities with specific needs. For example different levels of pro-active case management have been deployed for specific groups.

Best practice can be achieved through a variety of health system types such as publicly or employer funded health insurance schemes (German, Dutch, US) or national schemes such as the UK NHS where the characteristics described above are exhibited.

Australia may be performing well with international comparisons. Guidelines are available and dissemination is widely encouraged through professional bodies, government programs, disease specific national groups and local initiatives. However we do not have comprehensive and continuous data about compliance or impact. Locality and target group specific initiatives have been able to demonstrate success by creating the characteristics described above at the local level, but by definition this will be piecemeal.

b) Medicare

The Medicare payment system is characterised by fee-for-service based on individual consultations with a limited range of alternative payments available for specific activities and attainment of targets. It is now widely accepted that blended payment systems provide the flexibility to target incentives to achieve specific outcomes.
There has been a drift from either end of the spectrum – population based capitation to fee-for-service – to blended arrangements that can be utilised for different purposes (for example the Quality and Outcomes Framework (QOF) in the UK).

Capitation-based systems, either by population or condition, are strongly associated with achieving higher levels of continuity of care as they are associated with enrolment, membership or registration arrangements that support a long term relationship between provider and consumer. This forms the basis of establishing payment incentives for achieving best practice compliance or outcomes and supports the key characteristics of identifying the at risk or diagnosed population group; recording and monitoring information continuously to improve practice.

More heavily weighted capitation systems need to put particular concern to ensuring equitable access to service for individuals with high levels of need and difficulty for providers (avoiding cherry picking).

There are limitations in the Medicare system (regardless of payment method) in the area of chronic disease management because it does not fund the full range of services that would be typically required in a best practice guideline. The state systems, health insurance and privately funded service providers are critical to the delivery of comprehensive care.

Whilst financial incentives are not the sole driver of performance and quality improvement, they need to be aligned to quality improvement objectives and need continuous monitoring and renewal to ensure that the investment is achieving the goals intended.

c) Primary Health Care Networks (PHN)

Within the constraints of the current Australian system Primary Health Care Organisations (PHCOs) (now PHNs but formerly Medicare Local and Divisions of General Practice) have been important in demonstrating how local initiatives can overcome some of our whole system barriers. Crucially this has operated in partnership with other local bodies.

The key roles PHCOs have performed are

- Health service provider education
- Individual and community health literacy
- Community enabling and prevention activities
- Supporting clinical information collection and analysis for improvement
- Clinical pathway agreements and developments between multiple providers in primary care community health care and the acute/specialist sectors e.g. ‘Health Pathways’
- Targeting of specific at risk groups.

World-wide, these roles are performed by a number of organisational forms in various systems e.g. Accountable Care Organisations, health insurers, practice based networks, commissioning organisations and a variety of PHCOs determined by local system context. The key learning from Australia and overseas is that is that these roles are required to consistently and continuously to ensure best practice in chronic disease management.
d) Private Health Insurers

APHCRI has only commissioned one research project in this area; *Utilisation of allied health services by people with chronic disease*: Differences across health insurance coverage and policy change. The key findings of this research included

- Women are more likely to use allied health services than men
- Women's use varies at different stages of the life course
- There are large differences in women's use of allied health services between states
- The gender gap is greater post-retirement age
- People with non-English speaking backgrounds are less likely to use allied health services
- Health insurance is linked to use of allied health services, although the relationship is not straight-forward
- The relationship between insurance and allied health services is also reliant on other factors
- Visiting a GP is associated with use of allied health services, independently of health
- Musculoskeletal conditions are most consistently associated with use of allied health services
- Policy change appears to have some effect on use of allied health services though the magnitude is not strong.

From the perspective of health system financing there is no specific reason why health insurers cannot continue to play a significant role for their members. The limitations on the scope of coverage and mix of publicly and privately funded service providers make it difficult to achieve comprehensive best practice. However in partnership with other organisations such as PHNs there may be further opportunities.

In terms of community or population level initiatives they may only be able to indirectly have any impact on their membership by contributing to broader prevention efforts.

e) State and Territory Governments

State and Territory Governments have a critical role and interest in chronic disease management

- As a provider of community based health services critical to multidisciplinary care
- As a provider of acute and specialist services critical to a comprehensive care pathway and effective transitions of care
- In their role of improving population health and prevention of illness
- To achieve the goal of reducing unnecessary hospital admissions.

Through their operational arms, the Local Health District, there have been examples of partnerships with Medicare Locals to implement comprehensive clinical pathways for specific conditions.

Although APHCRI has not funded any research specifically addressing the roles of State and Territory Governments in chronic disease prevention and management, several APHCRI-funded projects have tangentially addressed this issue. One example is the Centre of Research Excellence in Urban Aboriginal Child Health.

One of the Centre’s aims is to determine the primary care provided to children attending four urban Aboriginal Community Controlled Health Services (ACCHSs) in relation to community identified
priority health conditions (ear health, developmental disability, risk factors for chronic disease and social and emotional well-being). Based on the outcomes of this research project the CRE leveraged $1.7M from the Federal and NSW Governments for the Hearing, Ear health and Language Services (HEALS) project in 2013 and 2014 to provided additional services to urban Aboriginal children through their partner Aboriginal Community Controlled Health Services (ACCHSs).

As a result of this additional service, a state-wide economic modelling project is underway to assess the cost-effectiveness of the HEALS project being extended to all Aboriginal children across NSW.

**Chronic Disease Management Models**

**a) Innovative models which incentivise access, quality and efficiency in chronic disease prevention and management**

APHCRI-funded research has provided the following innovative models that incentivise access, quality and efficiency in chronic disease prevention and management. However, while these models have been shown to be effective in specific settings, there is no evidence suggesting that these models are transferrable across other settings.

1. The APHCRI Centre of Research Excellence for accessible and equitable primary health care service provision in rural and remote Australia examined issues affecting access, quality and efficiency in chronic disease prevention and management. One outcome of this study was the development of the Modified Monash Model to address dissatisfaction expressed by many rural providers, services and professional organisations about the inappropriateness of the ASGC-RA (Australian Standard Geographical Classification – Remoteness Area) geographical classification system in the allocation of incentive grants. The Modified Monash Model is a typology of settlement size and location that determines incentive payments for rural and remote medical practitioners. It has now been adopted for implementation by the Australian Government Department of Health.

Some of the key findings were

- Primary health care service models need to be fit-for-purpose, something that is best achieved by policy-makers and funders working in very close association with local health providers and consumers.
- Improved access to comprehensive primary health care services leads to improved equity in health outcomes.

2. The Centre for Obesity Management and Prevention Research Excellence in Primary Health Care (COMPaRE-PHC) study is still in progress. It is examining preventative models of practice that will reduce obesity to minimise the development of associated chronic illness. To date, the centre has developed

- The RACGP SNAP guide on management of overweight and obesity in General Practice designed to assist general practitioners and practice staff to work with patients on the lifestyle risk factors including nutrition and physical activity.
- The CRE has also contributed to the development of the NHMRC’s Clinical Practice Guidelines for the Management of Overweight and Obesity for Adults, Adolescents and...
Children in Australia. The guidelines were also summarised as a COMPaRE-PHC topic summary.

3. The Centre of Research Excellence for Prevention of Chronic Conditions in Rural and Remote Communities is evaluating models for primary health care services for Indigenous and other high risk groups in rural and remote areas. The focus is on improving service delivery towards the prevention and management of chronic diseases such as diabetes, renal and heart conditions, and mental ill-health, as well as the complications arising from these. Finishing its work in 2016, the centre has so far identified that

- The model being trialled has achieved significant improvements in clinical indicators and important reductions in preventable complications requiring hospitalisation. The participating services have all indicated that they will adopt the health-worker-led model of care with appropriate local adaptations.

4. The APHCRI Inter-disciplinary Cross-boundary Stream of research explored models specific to integrated care systems. These are presented above in 1d ‘Private Health Insurers’ and below in 2b ‘Co-ordinated Care and Multidisciplinary Teams’.

5. Co-ordination and the Vulnerable Consumer Health Care Research studies are also presented below in 2e ‘Vulnerable Consumers’.

6. APHCRI has overseen a project examining pathways in sub-acute / post-acute care in Tasmania towards reducing re-admission rates and minimising hospitalisation. Results showed

- The success of using community nursing service to help with timely discharge from acute care
- The trial model was very cost effective. It freed up acute beds; protected patients from debilitation caused by long hospital stays, and saved on average $800 per patient per day.

7. The National Lead Clinicians Group research provided evidence of innovative models of care for

   a. High-risk Chronic Obstructive Pulmonary Disease patients, and
   b. Patients with Glioma and carers

b) Best practice of multidisciplinary teams (MDT)

The delivery of primary health care services, particularly for people with chronic and complex care needs, necessarily involves professionals who offer different elements that together provide holistic care of the person. APHCRI funded research included aspects of private health insurance cover for allied health services, and the way in which the insurance operates in concert with the patient/member’s other primary care services.

The Allied Health Chronic Illness items under Medicare have been a feature of the approach to improve access to services and better outcomes for people with chronic illness. The research explored how this feature works in practice around the country, whether best practice models are emerging and whether the outcomes for patients are better than they were before.

1. The role of allied health in the management of complex conditions in a comprehensive primary care setting. Key findings included
Patients appreciate access to Allied Health Practitioners (AHPs) and those operating privately within the community. They also appreciate Medicare funding some of these services. However, many older patients did not really understand the role of many AHPs.

The community nurse was pivotal to the provision and coordination of AHP and other services. The nurse acted as a case manager, facilitating access to AHP and other services. Having AHPs sited within the practice allowed easier and more complete communication. However, co-location was not essential to good multidisciplinary care (MDC). Rather, it was the capacity for coordination and mechanisms for timely professional communication that matter.

It was not necessary to have a large clinic and in-house services to develop good MDC. It did require an attitude by the practice owner and AHPs that MDC was possible and time should be invested to develop professional relationships. It also required flexible and expert practice management. Medicare funding of AHPs needs to allow for more services in keeping with the complex nature of the patients, in order to maximize the impact of AHP interventions.

2. **Utilisation of allied health services by people with chronic disease**: Differences across health insurance coverage and policy change. The key findings of this research are described above in item 1d: Private Health Insurers.

3. **Information sharing for the management of chronic conditions in primary health care**: How does it work and what are the outcomes?

To be most effective, information sharing should be open, two-way and inclusive of all members of health care teams, including clients and carers. Information sharing must also only be undertaken with appropriate consent otherwise this has the potential to cause clients harm. Funding systems impeded collaboration by requiring the development of multiple care plans for a client so that each health worker could receive funding for the care that they provide. The following areas should be addressed to facilitate a more effective approach to chronic condition management:

- Consistent guidelines are required to clarify what information health workers can share if they have full consent
- The option for clients to provide selective consent should be mandatory
- Medicare funding should be provided on the basis of effective care plan use
- Medicare Locals should identify areas of service overlap and communication breakdown between services in their regions and work with services to address these issues
- An expanded care planning role for practice nurses should be considered to allow them to play a case management role in order to facilitate the collaboration of multidisciplinary teams and to provide greater capacity for supporting client self-management.

c) **The role of Consumer Health Organisation (CHO) in Chronic Disease management**

Consumer health organisations (CHOs) constitute an existing and relatively low-cost community resource which has the potential to meet information and support needs that people with chronic
illness frequently express as being unmet in the formal health system. Key national (NHPAC, 2006) and international (WHO, 2007) policy statements call for stronger integration of these organisations in primary care to build a patient-centred health system.

1. A critical evaluation of the benefits of self-help organisations to people who suffer chronic diseases and examine ways to improve links between the groups and general practitioners. Key findings included

- CHOs are a health system resource that people with chronic disease access for information, services and support. CHOs are very well-regarded by those who do make contact, and CHO users report engaging in key health behaviours following contact

- The potential contribution of CHOs must be seen in the context of current health system constraints; GPs have limited opportunity to provide all the information, support and skills management that patients require

- Integration of CHOs in the health system, as seen in Diabetes Australia, appears to have helped establish referral pathways between primary health care and CHO settings. People with diabetes contacted the CHO sooner after diagnosis and were more often referred by a GP. The diabetes CHO also had a higher representation of men and people from lower socioeconomic backgrounds

- Strategies to embed other CHOs in the health system are required if the benefits associated with contact are to be extended to other chronic disease groups. There is an underlying disparity between the current policy agenda supporting the use of community resources in self-management initiatives and community attitudes regarding chronic disease management.

An important aspect of care coordination / integrated care is to ensure that transitions of care are optimally managed. APHCRI has funded a number of programs in this area and has also done some important work on behalf of the National Lead Clinicians Group (NLCG).

d) Transitions of care and chronic disease
Transitions of care are much more than clinical handover. A patient’s journey through the health care system will involve a number of transitions across service interfaces

![Transition Image]

The one constant in these transitions of care is the patient and their family / carers. Given this, it is imperative that their role must be central to any strategies developed to support transitions of care across sectors if these are to be maximally successful.

1. A review of the evidence conducted for the NLCG

- There are no ‘silver bullets’ (e.g. e-Health Records, case managers)
• The most successful strategies in terms of health outcomes were communication, relationship and process strategies

• There are some transitions of care (for example from hospital or home to hospice) and some patient groups (for example the mentally ill and Indigenous people from remote areas) where there is virtually nothing available in the literature.

2. Implementing care co-ordination plus early rehabilitation in high-risk COPD patients in transition from hospital to primary care. This study showed that people with COPD who participate in care coordination plus early rehabilitation will have lower hospital readmission rates at 28 days and greater physical activity levels at 28 days after discharge than a control group of similar patients.

3. Pilot implementation of ICoPE: An innovative model to support patients with glioma and their carers across key care transitions. This research found that when a support program is introduced early for patients with a progressive, chronic and eventually fatal illness like glioma, they have improved quality of life, improved quality of dying and less use of aggressive.

4. Improving the ‘network planning and management’ of integrated primary mental health care for older people in rural regions. This project aimed to validate and test a model for integrated primary health care centres to plan and manage the development of integrated primary mental health care for older people, using a participatory Plan-Do-Study-Act cycle. Results were that in order to best meet the complex care needs of older people with mental health problems, there needs to be coordination at both the level of service planning and client care.

e) Models of chronic disease prevention and management in primary health care which improve outcomes for high end frequent users of medical and health services

Vulnerable consumers often have complex health and social care needs that involve contributions from many different professionals and organisations. Some of these contributions may come from outside the health care system. For many vulnerable people, links with an individual GP or practice; or with an individual health provider, are fragile or non-existent while their health care needs may be greater than many others. Some people with chronic conditions fall in the vulnerable consumer category and lessons from this stream may be applicable to chronic diseases.

The Partnerships in care: attributes of successful care coordination models which improve health care networks for people with intellectual disability study focused on the provision of coordinated care for people with intellectual disability who live in rural towns, as well as their carers and/or other close advocates. Some key attributes of care coordination identified, which build on care networks and improve health outcomes, include

• Introduce sustainable, long-term models of local health care coordination

• Situate care coordinators within primary health care with effective working relationships with general practice
- Ensure a role as trusted navigator and support use of a standardised comprehensive health assessment tool
- Implement benchmarking of health outcomes for people with intellectual disability against local population data
- Enforce accountability.

**Indigenous specific models**

To be maximally effective, chronic disease management programs targeting Indigenous Australians must

1. Recognise the additional disease burden borne by population groups such as Indigenous Australians, people with mental illness, people with physical and intellectual disabilities, and refugees, and
2. Be tailored to be linguistically and culturally relevant to specific population groups such as those whose first language is not English, those with poor literacy, and those from different cultural backgrounds.

A systematic review of Chronic Disease Management models conducted for APHCRI in 2006 identified a number of factors that are thought to contribute to the success of chronic disease programs in Indigenous people.

Key factors relevant to initiatives in Indigenous health in general are

- Community support and involvement
- Effective local area partnerships and working groups
- Participation and professional development of Aboriginal Health Workers
- Adequate resources and coordination between existing human, financial and physical resources and initiatives
- Effective planning and evaluation with feedback to the community
- Appropriate timeframes for the development and implementation of initiatives.

Key factors specific to initiatives for early detection and management of chronic conditions among Indigenous people are

- Accessible early detection and interventions program
- Local (including outreach) multidisciplinary teams or taskforces with clear roles and responsibilities
- Locally agreed evidence-based clinical protocols; and systems for follow up care including register and recall systems.

The more recent APHCRI funded Home-based, Outreach case Management of Chronic Disease Exploratory (HOME) Study (2012-14) has shown how culturally sensitive care can be provided to Indigenous Australians.
The HOME Study developed and implemented a home-based, case management model of patient-centred multidisciplinary care for Indigenous Australians with complex chronic disease in an urban Aboriginal and Torres Strait Islander primary health care service. This exploratory study evaluated the model of care’s feasibility, acceptability and appropriateness.

- This model of care was feasible, acceptable and appropriate in its setting
- Patient participants’ high levels of satisfaction were verified by participation rates and the lack of differential attrition
- Patient participants became more involved in their health care, self-rated health status improved, depression rates decreased, and significant improvements in key clinical indicators were achieved
- Health service staff were highly satisfied and noted improved care quality for complex patients
- Hospitalisation rates decreased, as did the ratio of general practitioner consultations for acute care compared with preventive care.

The APHCRI funded Developing a Wellbeing Framework for Aboriginal and Torres Strait Islander Peoples Living with Chronic Disease (Wellbeing Study) also highlighted salient issues with respect to supporting Indigenous Australians with chronic diseases noting

- Chronic care models that are currently in use within primary health care settings, usually focus upon the systems, resources and policies that are required to deliver care, including prepared and proactive practice teams and informed and activated patients
- The important roles of culture, spirituality, Country and family in maintaining health and wellbeing are notably absent from such models
- The Wellbeing Framework developed through this study considers these more holistic aspects of health in addition to the physical, mental, emotional, and social dimension.

Work from the APHCRI funded Centre of Excellence for Accessible and Equitable Primary Health Care Service Provision in Rural and Remote Australia shows that improving access to primary care in remote communities for the management of diabetes results in net health benefits to patients and cost savings to government.

The APHCRI funded Centre of Research Excellence: Innovative Models Promoting Access-to-Care Transformation (IMPACT) which is in its initial phase aims to generate organisational innovations to promote access to primary health care for vulnerable populations, specifically the poor, refugees and people from indigenous communities. Activities are being conducted through a learning network of administrative regions within three Canadian provinces and three Australian states.

The aim of this CRE approach is to transform the primary health care organisational structure to improve access to appropriate care for vulnerable populations resulting in reduced unmet need, avoidable emergency department visits and avoidable hospitalisations for vulnerable populations.

The program’s three main objectives are to
- Develop a network of partnerships between decision makers, researchers and community members to support the improvement of access to primary health care for vulnerable populations

- Identify organisational, system level community based primary health care innovations designed to improve access to appropriate care for vulnerable populations, and establish the effectiveness and scalability of the most promising innovations

- Support the selection, adaptation and implementation of innovations that align with the regional partners’ local populations’ needs and priorities and evaluate the effectiveness and efficiency and further scalability of these innovations.

A number of smaller research projects funded by APHCRI under its Coordination and the Vulnerable Consumer Health Care Research stream has also undertaken research on vulnerable populations (refugees, people with disabilities) and on the enablers and barriers to achieving integrated care that relate to chronic disease management. This includes the Returning Home, back to the community from custodial care an evaluation of three projects for the Commonwealth Department of Health, investigating how the primary health care system can better support Aboriginal people released from prison, many of whom will have chronic health issues, including mental health and substance abuse problems.
PART 2 APHCRI@ANU – ANU Research School of Population Health

Introduction

APHCRI@ANU’s research focuses on

- understanding variation in health services as a tool to developing better management of chronic illness in both Indigenous and the general populations, and
- the development of a geographic mapping system (GRAPHC) which is the principal location for spatial health information in Australia.
  - GRAPHC provides data, maps and tools to support planning of population health measures for prevention and management of chronic illness by improving understanding of the distribution of chronic illness and the socio-economic and other factors with which it is correlated.

Better management of chronic illness, and better primary and secondary prevention of chronic illness, have been frequent and important research topics for APHCRI@ANU, because

- chronic illness is now the major component of primary care workload
- the management of multiple, chronic diseases now dominates general practice [2]
- variations in chronic illness management may lead to costlier and poorer outcomes for both the health system and for individuals.

Attempts to create a set of principles that would underpin a strong, effective system of chronic illness management (including prevention and treatment) have remained fluid and not definitive. Trying to reach a viable, effective system to prevent and to manage chronic illness is complex, and many issues remain to be determined.

This submission to the Standing Committee is lodged by the research team at APHCRI@ANU, and reflects the understanding and work of that group.

Key elements of Chronic Illness

Chronic illness, by definition, **cannot be “cured”** and requires ongoing care to improve and stabilise the condition/s for the individual. **Some major conditions (e.g. heart disease, some cancers) and some precursors to conditions (e.g. obesity, poor fitness) can be prevented or delayed** both by individual and community action, but most effectively through population health measures. This is particularly so when the community and government address the impact of the **social determinants of health** (i.e. housing, education, availability of nutritional food, employment, social support, health care systems). Addressing the social determinants of health ensures that the burden is not borne solely by individuals among the least well-resourced and least powerful.

Evidence for the social causes of poor health, particularly chronic ill health, is provided by many key 20th Century writers and studies, but includes Marmot and Wilkinson’s and Margaret Whitehead’s work in the UK; the Harvard Nurses study in the US and the work of many APHCRI@ANU researchers [3-7].

The **experience of people with a chronic condition and their carers can vary enormously and is amplified by comorbidity, which is often present.** This variation arises even when the conditions are
well understood, and their best management practices are well documented. It is exemplified by diabetes research, including our own, where some people talk of the virtual impossibility of being able to continue in employment, while others are able to manage the condition and continue working. There are many reasons that this may be so, but two that emerge often are the inability or unwillingness of workplaces to provide a working environment that is flexible enough to manage changing needs of many of their workers (a not dissimilar issue to the one faced by older workers); and the sense of stigma in the workplace and the negative reactions of colleagues and senior staff. This stigma is often expressed strongly in relation to people with mental illnesses, but exists in large measure for people with any long term condition where the person needs support of some kind – flexibility, patience, special equipment, access, time for appointments, that can feel like ‘special treatment’ to other workers, in the same way that child and personal care demands can affect workplace acceptance.

What becomes clear is that there is no single way to include all chronic illness events in neat bundles and deal with them as such, either in primary care or in other policy areas. However, there are many principles and practices that apply to the prevention and management of chronic illness within the primary care field that can improve experience and outcomes for individuals and their families, health care providers, and communities. We outline the most important of these below.

In this submission, we will state what the evidence tells us to be good examples of better managing and preventing chronic illness within the field of primary care. While mainly referencing our own work, we note that there is now a well-established body of research addressing aspects of these issues.

The findings of relevant research are detailed under each of the questions posed by the Committee.

1. **Examples of best practice in chronic disease prevention and management, both in Australia and internationally**

If the goal is better patient outcomes, our own and other evidence suggests that there are some key principles that should be considered best practice in the prevention and management of chronic conditions [8-12].

- **Patient centred-care** should be the standard approach for all processes.
- **Prevention is best achieved by population health measures** and by ongoing programs for identification and advice to people at risk, **Following guidelines and applying co-ordination and continuity of care** will ensure the most efficient and effective care and outcomes.
- **Co-ordination of care is generally necessary** since most people with chronic illness have more than one condition, and many more than three. Managing conditions one at a time can lead to contradictions and problems for both the patient and the system. Without co-ordination, it is difficult to schedule care logically, to be aware of the requirements of each of the conditions, and to create management that fits with patient need. The developing use of Health Pathways [13] provides one example of whole system planning and management at the individual patient level that distinguishes between those who do, and those who don’t, need particular support.
- **Fostering of health literacy and self-management** is important for all conditions, but particularly for people with chronic conditions where the patient and their family are the day-to-day decision makers and managers of health care.

- **e-health** promises a much more consistent approach to management, better co-ordination of care processes and events, better continuity of information between professionals and between patients and their care providers, and better patient awareness, which will lead to more informed decisions. While currently under-developed, with increasing use of mobile technology and the possibilities of linking self-monitoring with decision making, the next generation of people with chronic diseases will have tools available that go well beyond the static, one way tele-health tools like home monitoring implemented over the past 15 years.

Implementing best practice in a way that is cost-effective to both the system and the patient remains a complex issue, especially as there are many stakeholders – commonwealth, state and territory, individual professions and patients and families – all concerned with different elements of the costs and outcomes of care. Best outcomes for patients and for the community are probably best achieved by a combination of many elements.

**Setting the structures in place to give effect to the principles above in a way which is effective, cost effective and affordable is difficult.** There have been many trials including the Australian Diabetes Care Project (DCP), (which showed that using IT, enrolment, pay for performance, care co-ordinators can be effective in diabetes management, including in reducing HbA1c [14]), Medical Homes and Affordable Care Organisations in the USA, a range of programs including the Quality Outcomes Framework in the UK and many variations of these themes.

Outcomes of these trials and interventions confirm that the principles above are central, note that they can be achieved and provide improved outcomes in most cases (depending on both programs and conditions), and that by keeping people out of hospital they

- sometimes save money
- sometimes generate net costs but are cost effective [15], and
- sometimes generate net costs but have higher costs for the benefits achieved than would normally be considered cost effective (as seen in the Diabetes Care Project).

Any effective model for managing chronic illness needs to be **sensitive to the variations** in need for different people and to **target interventions appropriately**. One reason for poor cost effectiveness is the ‘one size fits all’ approach that leads to high levels of unnecessary costs for some people. For example, in the diabetes case very few people need to go to hospital, and the costs of high levels of care for all patients while successful in keeping some of those people out of hospital, and no doubt improving the lives of many, also makes little difference to many others. It should also be noted that in Australia such programs are rarely likely to be cost effective for the Commonwealth, as hospital and community care savings are largely realised by the States.

While the research fails to identify a ‘single solution’ to the challenge of prevention and management of chronic illness, future research would be wise to focus on

- timely and comprehensive evaluation of both large and small scale innovations
• translation of evidence into better practice and better policy through better take-up of evidence, and
• scaling up of experiments into accepted practice, and enabling and supporting policies.

2. Opportunities for the Medicare payment system to reward and encourage best practice and quality improvement in chronic disease prevention and management

Despite Medicare payments being available to promote aspects of best practice for chronic illness management, for example, having care plans and team care, the majority of people with chronic illnesses do not have these services in place, or the general practice is not claiming for them [16, 17]. This suggests that availability of a Medicare item alone will not result in better outcomes.

The evidence from the Diabetes Care Project in Australia and others overseas suggests that the best approach for managing long term and complex conditions will result from

• blended payment systems that bring together elements of capitation payments, performance and quality enhancement payments that allows for the demands of complex care [14, 16, 17]
• ways of funding primary care, most likely through practices or PHNs, to create better co-ordination for those who need it [14, 18, 19]

A model which is gaining attention in Australia following successful implementation in the US and Canada is the Shared Medical Appointment, which brings together a group of patients with a multidisciplinary primary care team to provide both a medical consultation and other nursing and allied health input. A key feature is the opportunity for increased peer to peer support. The model has been found to be attractive to both patients and health care workers in a range of conditions (mixed groups, single condition groups). The evidence of effectiveness under Australian systems conditions has begun to be brought together [20] and APHCRI@ANU is involved with a number of groups to establish trials for people with diabetes; and for new parents. While existing Medicare item numbers are currently used for Shared Medical Appointments, there is a need to ensure that they are not open to abuse, and are able to be used to fund the mix of care provided.

3. Opportunities for the Primary Health Networks to coordinate and support chronic disease prevention and management in primary health care

APHCRI@ANU’s research suggests that PHNs (or other meso-level primary care organisations) can provide leadership and support to primary care practice [10, 11, 21, 22] in

• quality initiatives for their population area
• standard setting and monitoring
• clinical leadership for the translation of evidence into practice
• research opportunities in a PHN area - scaling up good ideas, developing a culture of improvement
• service delivery linked to established need
• integration with other providers and policy areas (healthy cities, health friendly facilities)
• integration within the health and care system- links to secondary and tertiary providers
education of patients about availability and accessibility.

With the new PHNs having a more explicit commissioning role, opportunities arise for the development and funding of care co-ordinators, which was found to be successful and indeed cost-effective in the context of Divisions of General Practice [15].

4. The role of private health insurers in chronic disease prevention and management

APCHRI@ANU has examined the models of care provided by four different primary care providers to see whether the model that applied affected the coordination and outcomes of care [10]. We found that a broad base that allows for local responsiveness is needed for coordination of care to be achieved.

The private health insurer we interviewed offered a range of services to individuals who were seen as ‘at risk’ of chronic illness (high blood pressure, overweight); or at risk of increasing seriousness of chronic illness (worsening profile, admission to hospital related to chronic illness). The program offered by the private health insurer to address these risks was based on targeted goal setting and coaching, with patients taking up the offer of enrolling. The program operated independently of any other services, so offered a stand-alone support/education package to individual consumers, without any linkage to the other aspects of the person’s care.

5. The role of State and Territory Governments in chronic disease prevention and management

Many of the problems identified by patients and health professionals in our studies relate to the failure of the different jurisdictions and the services for which they are responsible, as well as the failure of individual professionals and services to work co-operatively. The different jurisdictional and professional interests, payment systems, governance models and priorities create loopholes for systemic failures to occur.

Our research on chronic illness experience and policy and practice interventions over the past 10 years suggests that State and Territory governments are

- Key partners in health policy for local areas, in inter-governmental policy to ‘close the information gap’ and ‘stop the buck-passing’ in services within the state provided services
- Key partner with primary care in integration of services across the primary/secondary interface
- Supporters of research and development into models of service delivery, and application of models of prevention
- Supporters of interdisciplinary working across the interfaces between commonwealth and state funded and provided services- especially in aged care, chronic illness and disability.

6. Innovative models which incentivise access, quality and efficiency in chronic disease prevention and management.

Our work has not addressed incentivisation specifically, but it does show that the health system misses opportunities to provide best practice care when there are no ‘drivers’ to encourage it. For example, GPs often refuse to attend case conferences because their time will not be adequately reimbursed in the context of their other time pressures [1]; practice nurses and allied health workers
are not reimbursed for their co-ordination work, which makes it less likely that they will be encouraged by their practice principals to engage in it.

The issues discussed in the Discussion Paper recently released by the Primary Health Care Advisory Group [23] are all issues we have considered when looking at the potential policy drivers that would improve coordination and integration of care, and we would agree with the view that providing an incentive for a practice to take on the work of coordination, within primary care, and between primary care and other sectors would assist. Options such as Medical Homes, as outlined in the Discussion Paper, offer one pathway.

Much of the important work now carried out addresses the systems issues of achieving access, quality and efficiency rather than incentivisation, and includes examining how the tiers of health services work, and how they can help, or obstruct, innovation. The knowledge gained from research in collaboration with Indigenous health services, could be applied to other health care sectors or populations. In particular, it is important to recognise that the social and cultural elements that affect health of Indigenous people may also operate to affect the health of other populations and individuals, such as rural populations.

APHCRI@ANU has addressed how service planning and delivery systems can work more effectively to improve access to and quality of chronic illness management and care. Ongoing investment in systems (planning, quality improvement, information management) is necessary, but often absent in quality improvement initiatives, which are characterised by short term funding and limited structural support in both Commonwealth and State/Territory bureaucracies [7, 10, 22]. Developing incentives for effective systems for service delivery in rural and remote areas needs to take account not just of indices of remoteness, but should also consider socioeconomic and workforce supply issues [6, 24].

7. Best practice of Multidisciplinary teams in chronic disease management in primary health care and Hospitals

As under (1), the principles that need to be in place to promote good management of chronic illness apply here.

Some specific points from our research [2, 11, 18, 19, 25-29] suggest that there is a much more widespread acceptance of nursing and allied health professional roles in health management, not simply as professionals who put in place the treatment recommendations of a medical practitioner, but as independent professionals, and as members of multidisciplinary teams. The conditions under which these teams will work best include having good leadership, clear practice guidelines so that the patient has consistent practice and advice, good information sharing so that all members of the team know what needs to happen. In primary care though, there needs to be a way of ensuring that the extended or novel work of these professionals falls into their agreed workload, and so becomes part of best practice care. Nursing and Allied Health staff working in state health services are able to have a clear patient centred approach because their work does not rely on funding of specific activities - there can be more flexibility in their roles.

Shared medical appointments, as outlined under (2) provide one novel avenue for chronic illness management that is multidisciplinary, and appears, from evidence from Australia and overseas, to be acceptable to all members of the team, and to patients. Since chronic illness management goes on throughout the often long course of the illness, shared medical appointments offer a great
potential for continuity of care over time that is targeted specifically to ongoing management and self-management.

Health Pathways, mentioned in the Discussion Paper are discussed in section (1). Ideally, these pathways are locally agreed between practitioners and service managers, allowing the development of locally relevant and consistent approaches to complex care.

The evaluations to date (not by our team) have been generally positive in terms of relationships between primary and secondary care providers [30].

8. Models of chronic disease prevention and management in primary health care which improve outcomes for high end frequent users of medical and health services

Our work has shown that the impact of multi-morbidity is felt not only on the resource demands in the health system, but also particularly by people experiencing them, with costs rising in both time and money terms as the number of conditions increases [31, 32]. In addition, illness and particularly chronic illness is a significant reason for people to leave the workforce early - each condition, in our work, reduces working life by a year in people over 50 years of age [33].

The result is that people at the high use end are not only sicker, but are more likely to be on a low household income, with a substantial proportion of that income spent on health and related services. The MBS and PBS safety nets, and our many social welfare provisions, only partially protect the most vulnerable from hardship related to their health.

When we look at the time costs associated with chronic illness for people with chronic conditions and the (usually) family members who care for them, time spent each day managing medicines, other treatments, appointments, travelling to and from health activities does not appear high, until it aggregates into hours spent each month. For some people with multiple conditions, hours are spent each day on health management, and the need for constant awareness and alertness to change creates an invisible workload that affects other parts of life. This burden is not generally incorporated into health practice, and when a person needs to interact with, and pay attention to the instructions of, multiple professionals, the scale of the health activity can be enormous, even though each element of it may seem reasonable and easy to manage [34, 35].

While our work cannot point to single models that improve the system for high end users, all our results agree with other researchers, namely both policy and practice should support models that promote

- good continuity of information between and among all the relevant bodies
- standard good practice applied by all the health professionals involved
- engagement of the patient and, when appropriate, their carer in the decision making about their care and the priorities that are set for management and interventions and
- assistance with the co-ordination of care for those who need it.

Smooth transitions between events need to be supported by ready access to information, thoughtful sharing of information that helps the transitions, such as notice of medication changes, or recommendations for further care; and agreed and shared back up plans for when things go wrong.
As noted earlier, the cost effectiveness of interventions depends on targeting effective interventions to the patients who are most likely to benefit, and where health benefits are largest. Targeting efforts to ensure guidelines are followed and appropriate levels of co-ordination and of continuity of care to those most in need, most notably those with multiple morbidities, is likely to generate the greatest returns for the effort and cost involved.
Attachment 1: APHCRJ’s funded research program

The Centre of Research Excellence for accessible and equitable primary health service provision in rural and remote Australia (2011 – 2014)

First two named Chief investigators

Professor John Wakerman, Flinders, Northern Territory, Flinders University
Professor John Humphreys, School of Rural Health Research, Monash University

This Centre has explored how improved access to appropriate primary health care services for populations with poorest access will increase equity in health care through improved health literacy, service utilisation and health outcomes. Broadly, the findings are summarised below:

Workforce development and capacity building

The CRE supported five PhD students and three post-doctoral Fellows. The capacity building program also supported eight health service participants to complete their work-based projects, resulting in one publication and manuscripts at various stages of completion and submission. The Participants also had the opportunity to present their findings at conferences through the year.

Knowledge generation

Under the research program, Rural and Remote PHC Service Evaluation Framework, the Centre completed its definition of a basket of core primary health care services that all Australians should be able to access. Utilising a long-standing Delphi group, the Centre also defined community population thresholds at which each service should be provided by a resident health professional.

Translation – policy and service development

An example of successful knowledge uptake was the Modified Monash Model, a typology of settlement size and location that determines incentive payments for rural and remote medical practitioners. This was based on work led by CIs Humphreys and McGrail. This work addressed the dissatisfaction expressed by many rural providers, services and professional organisations about the inappropriateness of the current ASGC-RA geographical classification system in the allocation of incentive grants. It has now been adopted for implementation by the Australian Government Department of Health. Humphreys has been appointed to an expert panel to advise the minister about its implementation.

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Centre of Research Excellence in primary health care microsystems (2011 – 2014)

First two named Chief investigators

Professor Claire Jackson, University of Queensland, and President of the Royal Australian College of General Practitioners
Professor James Dunbar, Greater Green Triangle University Department of Rural Health, Flinders University and Deakin University

This CRE has addressed primary health care quality, governance, performance and sustainability issues by investigating improved models in regional governance, e-health, effective multidisciplinary teamwork, performance and accountability.

Workforce development and capacity building

Successfully trained three postdoctoral fellows, four PhD students, and two Research Associates to become leading primary health care researchers.

Knowledge generation

The study on improved uptake, utilisation and spread of Collaboratives in Australia produced a Patient Safety Collaborative Manual which has been endorsed in a foreword written by the Australian Government Chief Medical Officer and was handed over to the Improvement Foundation Australia (IFA) which intends to establish the first patient safety collaborative in 2015 to improve patient safety in practices nationally. This research has provided learnings and strategy for the IFA and the DoH. Policy recommendations have been developed based on an understanding of the organisational characteristics of primary care that are conducive to the use of the Collaboratives as a quality improvement program. This has also included an understanding of the impact that the Collaboratives have had on improving quality practices in the primary care team.

Translation – policy and service development

A Primary Care Practice Improvement Tool (PC-PIT) was validated for use in improving quality, performance, sustainability and integration of primary health care. The tool has been used by primary care practices nationally to improve quality and build accreditation options.

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The Centre of Excellence for Indigenous primary care intervention research in chronic disease (2011 – 2014)

First two named Chief investigators

Dr Alex Brown, Baker IDI Heart and Diabetes Institute Central Australia
Professor Alan Cass, The George Institute for Global Health

This Centre has built on the Kanyini Vascular Collaboration with the following key objectives,

- Improve the quality of care, the quality of life and outcomes of chronic disease.
- Examine the impact, utility and effectiveness of the federal governments ‘Closing the Gap’ chronic disease package elements within partner primary care services, with a view to maximising benefit for patients and informing policy development
- Develop a cadre of Indigenous primary care researchers with the skills and support to contribute to their communities needs in chronic disease into the future.
Workforce development and capacity building

Under the project, Towards the Development of a Wellbeing Model for Torres Strait Islander Peoples Living with Disease Study (Wellbeing Study), a Wellbeing Framework was developed. It is anticipated that primary healthcare services will adapt the Wellbeing Framework into locally relevant Wellbeing Models and will implement specific applications that are appropriate to their local context. The Wellbeing Framework was used for capacity building. It was developed for and by Aboriginal and Torres Strait Islander peoples. Thirteen Aboriginal and Torres Strait Islander healthcare workers from seven participating primary healthcare services were appointed to act as Stage Three Research Fellows as part of the Wellbeing Study between August and November 2014. As part of their role, the Stage Three Research Fellows were provided with training in ethical research and practical qualitative data collection techniques. They were then supported by core research staff to undertake semi-structured interviews and community assessment workshops with healthcare providers and Aboriginal and Torres Strait Islander community members within their healthcare service. The Research Fellows then participated in data analysis and interpretation.

Knowledge generation

The Wellbeing Framework has been identified as an exemplar study to be used in a Masters of Public Health course at the University of Adelaide. This encourages future healthcare professionals to consider the evidence developed from this study before beginning their careers.

Translation – policy and service development

Under the Home-based Outreach Chronic Disease Management Exploratory Study (HOME Study), the model of care was taken up permanently as part of ongoing service delivery at Inala Indigenous Health Service (IIHS). Queensland Health committed funds to employ a second case manager to deliver this care which enabled the ongoing recruitment of Study participants. In late 2014 Queensland Health again committed funds for the extension of HOME with the employment of a third case manager, continuation of the Indigenous Research Officer position and continuation of the evaluation until June 2016.

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The CRE for urban Aboriginal child health (ending December 2016)

First two named Chief investigators

Professor Emily Banks, National Centre for Epidemiology and Population Health, Australian National University

Professor Jonathan Craig, University of Sydney

This Centre is addressing the knowledge and service gap in the urban aboriginal health service and to identify sustainable and transferable improvements in Aboriginal primary health care. The Centre is led by Professor Emily Banks from the National Centre for Epidemiology and Population Health (NCEPH) at the ANU, in collaboration with four Aboriginal Community Controlled Health Services (ACCHS) in New South Wales, the Aboriginal Health and Medical Research Council and The Sax Institute. This CRE has three research programs.
1. Data Enhancement – Ensuring Quality in Urban Aboriginal Health

2. HEALS (Hearing Ear health and Speech services) project (completed)

3. Capacity Building

**Workforce development and capacity building**

The CRE is currently providing training and support for 11 trainees: four Aboriginal Research Officers at participating Aboriginal Community Controlled Health Services; two post-doctoral fellows (one Aboriginal); two PhD students; one MPH student, and two Aboriginal Diploma students. One of the Aboriginal researchers, Dr Ray Lovett was awarded an NHMRC Early Career Fellowship and an *Endeavour Award*, to work in Oxford. The Centre is further developing capacity by training Aboriginal health workers in knowledge translation and assisting ACCHSs to build their skills in the use of evidence.

**Knowledge generation**

A state-wide economic modelling project was commenced to assess the cost-effectiveness of the HEALS project being extended to all Aboriginal children across NSW. The HEALS study will be completed in March 2015.

**Translation – policy and service development**

The CRE leveraged $1.7M from the Federal and NSW Governments for the *Hearing, Ear health & Language Services (HEALS) project* in 2013 and 2014 to improve service delivery in the area of ear health and speech. These funds enabled the roll-out of the HEALS project that provided additional services to urban Aboriginal children through their partner Aboriginal Community Controlled Health Services (ACCHSs).


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**The CRE for the prevention of chronic conditions in rural and remote high risk populations (ending December 2016)**

**First two named Chief investigators**

**Professor Robyn McDermott**, University of South Australia

**Associate Professor Kathryn Shirley Panaretto**, Queensland Aboriginal and Islander Health Service

This CRE is evaluating models for primary health care services for Indigenous and other high risk groups in rural and remote areas. The focus is on improving service delivery towards the prevention and management of chronic diseases such as diabetes, renal and heart conditions, and mental ill-health, as well as the complications arising from these. The Centre is led by Professor Robyn McDermott from the University of South Australia, in partnership with the Aboriginal Health Council of South Australia, Queensland Aboriginal and Islander Health Council, the Royal Flying Doctor Service, and James Cook University.

The three research programs within this CRE are

1. Nutrition and Physical Activity in chronic disease prevention
2. Mental Health and Substance Misuse in chronic disease prevention

3. Clinical Systems Improvements in Primary Care

**Workforce development and capacity building**

The CRE has supported four post docs and four PhD students. In addition, the CRE partially supported a two day workshop on Systematic Reviews. This workshop was attended by 13 doctoral candidates and post-docs, some of whom are connected with the CRE. Two Indigenous CRE researchers gained notable awards and grants in 2014. One, Sandy Campbell, was awarded the inaugural NHMRC Rising Star Research Excellence Award which was granted to the top-ranked application by and Indigenous researcher in the Early Career Fellowship Scheme. The second researcher, Sean Taylor, won a *Roberta Sykes Fellowship* ($8,000) to fund an extended doctoral attachment to the Behavioural Diabetes Institute in San Diego, USA and he also won the *My Pathway Ken O’Brien Award* for “inspirational work in health services, and helping reduce chronic disease in Indigenous people in the Torres Strait region”.

**Knowledge generation**

Consultation meetings with partner Aboriginal community controlled health services were held over the year to determine key service-related research priorities for the next five years. There was agreement that a priority would be to better understand the links between social and emotional wellbeing in Aboriginal and Torres Strait Islander youth, and to better integrate primary care service provision to these groups so that mental health is more central to the service model. This includes developing better measures of psycho-social health which can be linked to existing measures of metabolic health.

**Translation – policy and service development**

The CRE Research project, *mental health and substance misuse in chronic disease*, and the *Alcohol Management Plan Evaluation Study* attracted interest from politicians and policy makers in the lead up to the 2015 Queensland election with CRE researchers being consulted regularly.


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*The Centre for Research Excellence in the finance and economics of primary care (ending in 2016)*

**First two named Chief investigators**

**Professor Jane Hall**, Centre for Health Economics Research and Evaluation, University of Technology Sydney

**Professor Philip Davies**, University of Queensland

Led by Professor Jane Hall at the University of Technology Sydney, this Centre is focusing on the economics and finance of primary care in Australia. The aim is to build an evidence base to support primary care reform. The research is evaluating recent and new primary care policies and will use this evidence to inform the development and implementation of new initiatives.
The research programs within this CRE are

1. Financial incentives for GPs
2. Consumer experience with GPs
3. Exploring variation and predicting the future

**Workforce development and capacity building**

The CRE has recruited three PhD students, two post-doctoral fellows and two senior post-doctoral fellows. The CRE has developed a Master Class in health policy and economics which provides participants with an in depth understanding of the funding flows and incentives in the Australian system and exposure to leading international and national scholars. In 2014, this included Dr Niek Klazinga from OECD who has led many international health system comparisons.

**Knowledge generation**

The CRE has established the Australian Health Policy Fellowship which aims to provide a select cohort of Fellows with the opportunity to meet senior Australian health officials and policy analysts, and receive briefings on the Australian health system. A number of primary care researchers are included in the Fellows.

**Translation – policy and service development**

The CRE program of research on Financial Incentives (PIPs, SIPs, bulk billing incentives) and other measures on general practice activity and use and outcomes for patients has produced new evidence on how the incentives introduced to reduce out of pocket payments impacted on consumers and fees charged. The CRE have explored the effect of ageing on the use of health care and showed that elderly people living alone have a greater use of hospital use. The first concentration curves for health care expenditure in Australia have been produced.

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**The Centre of Research Excellence in primary oral health care (ending in 2016)**

**First two named Chief investigators**

**Associate Professor David Brennan**, Australian Research Centre for Population Oral Health, School of Dentistry, University of Adelaide

**Dr Leonard Crocombe**, Australian Research Centre for Population Oral Health, University of Tasmania, University of Western Australia, Menzies Research Institute Tasmania

This Centre is conducting a program of research to improve primary oral health care for disadvantaged Australians. The focus areas are

1. Successful ageing and oral health
2. Rural oral health
3. Indigenous oral health
4. The oral health of people with physical and intellectual disabilities
Workforce development and capacity building

The CRE recruited and supported three post-doctoral researchers, three PhD students, and seven oral health practitioner higher degree scholarships, as well as numerous part-time research assistants.

Knowledge generation

The completed first stage of the study on Dental practitioners: Rural work movements showed that the most common reasons given for recruitment to rural practice were attractive job availabilities and financial incentives. The main reasons for retention in rural practice were personal and professional satisfaction. Long-term rural practitioners had strong connections to their local area through social networks and/or family. Urban practice was considered financially more rewarding and easier for children’s education and access to cultural events than rural practice. The analysis of data from this stage has been used to design the questions for a survey of Australian-registered dental practitioners.

Translation – policy and service development

The project, Why Aboriginal adults who are referred for priority dental care do not take up or complete a course of dental care, was completed. A report based on the project has been provided to the South Australia Dental Service, who will evaluate the findings and use them to inform their future policies and procedures in providing priority dental care for Aboriginal adults.

Website: http://www.adelaide.edu.au/arcpoh/about/hsru/cre-primary-oral-health-care/
Contact: annalisa.agrests@adelaide.edu.au

The Centre for Obesity Management and Prevention Research Excellence in Primary Health Care (COMPaRE–PHC) (ending in 2016)

First two named Chief investigators

Professor Mark Harris, Centre for Primary Health Care and Equity, University of New South Wales
Professor Adrian Bauman, School of Public Health, Sydney University

Preventing and managing obesity requires complementary intervention strategies through population health and primary health care. This Centre is addressing these problems by conducting research across the lifecycle and with disadvantaged population groups to evaluate new ways for primary care practitioners to deliver assessment, brief advice, goal setting, more intensive coaching and skill development, weight maintenance and relapse prevention. The Centre will also conduct research on how these innovative programs can be translated into routine practice.

The CRE is conducting three streams of research

1. Early Childhood (due for completion July 2014)
2. Patients with low health literacy (due for completion in December 2015)
3. Implementation (due for completion in April 2015)
Workforce development and capacity building

The CRE has supported six PhD students and six post-doctoral fellows. One of post-doctoral fellows, Dr. Rachel Laws COMPaRE-PHC Fellow was successful in her application for an NHMRC Early Career Fellowship.

Knowledge generation

Led by the CRE Postdoctoral Research Fellow Rachel Laws, a systematic review was published on the impact of interventions to prevent obesity or improve obesity related behaviours in children (0-5 years) from socioeconomically disadvantaged and/or indigenous families. The findings from this study provide important insights for practitioners about elements of effective interventions for socioeconomically disadvantaged parents. The CRE has followed up on this study and is conducting two other studies on obesity management at the Inala Aboriginal Medical Centre – one focused on young children and one on health literacy in patients presenting at the clinic.

Translation – policy and service development

COMPaRE-PHC research informed the development of the published RACGP SNAP guide on management of overweight and obesity in General Practice This guide was designed to assist general practitioners and practice staff to work with patients on the lifestyle risk factors including nutrition and physical activity. Professor Mark Harris, Director of COMPaRE-PHC was on the SNAP working group.

The CRE had also contributed to the development of the NHMRC’s Clinical Practice Guidelines for the Management of Overweight and Obesity for Adults, Adolescents and Children in Australia. COMPaRE-PHC published an editorial in the Medical Journal of Australia to promote the existence and content of the NHMRC clinical practice to medical practitioners. The guidelines were also summarised as a COMPaRE-PHC topic summary. These short pieces were written following consultation with Medicare Locals and general practitioners, who expressed a need for a 1-2 page summary of the guidelines.

Website: [http://compare-phc.unsw.edu.au/](http://compare-phc.unsw.edu.au/)
Contact: c.spooner@unsw.edu.au

Centre of Research Excellence: Innovative Models Promoting Access-to-Care Transformation (IMPACT) (ending in 2018)

First two named Chief investigators

Professor Grant Russell, Monash University
Dr Jean-Frédéric Levesque, University of Montreal

The objective of this CRE, managed by Professor Grant Russell of Monash University is to transform the PHC organisational structure to improve access to appropriate care for vulnerable populations resulting in reduced unmet need, avoidable emergency department visits and avoidable hospitalisations for vulnerable populations.

The program’s three main objectives are to

1. Develop a network of partnerships between decision makers, researchers and community members to support the improvement of access to PHC for vulnerable populations
2. Identify organisational, system level Community-Based Primary Health Care (CBPHC) innovations designed to improve access to appropriate care for vulnerable populations, and establish the effectiveness and scalability of the most promising innovations.

3. Support the selection, adaptation and implementation of innovations that align with the regional partners’ local populations’ needs and priorities and evaluate the effectiveness and efficiency and further scalability of these innovations.

The program of work is based around six community-researcher partnerships known as Local Innovation Partnerships (LIPs). Each partnership represents collaboration between academics, decision makers and clinicians responsible for primary health care coordination and delivery. Community representation is also essential to the success of these partnerships. Therefore these six LIPs continually refine the focus and target of IMPACT’s research.

**Workforce development and capacity building**

IMPACT CRE has enrolled several Higher Degree Research Students within Australia. These include two PhD students and two BMedSc students. Also employed are one Post-Doctoral Research Fellow and two Senior Research Fellows.

**Knowledge generation**

Project 1: *Scoping Review* was completed. The findings from this research have been presented to the project LIP teams and stakeholders and have been used by the LIPs to define the next stage of project implementation. This project aims to identify currently implemented organisational innovations in Community Based Primary Health Care (CBPHC) to improve access for vulnerable populations and to develop a typology of innovations to better understand the organisational characteristics that these innovations aim to modify. The project has also provided case studies of innovations that reflect the contextual elements related to implementation. See case study below.

In relation to the finding from the *Scoping Review*, a series of facilitated deliberative forums involving stakeholders (LIP team, members of the community, providers, researchers, clinicians, decision makers as well as representatives from local government, housing, transport, education and other human services) were held. These forums worked to identify local needs, gaps and barriers to access to primary health care for vulnerable populations.

**Translation – policy and service development**

Each LIP has subsequently provided a comprehensive description of access related need and a map of existing interventions for vulnerable populations. LIP staff then worked with their management committees to prioritise an area of need and define a research question for realist review. The LIPs are currently in the process of refining an innovative intervention to address this prioritised area of need.


**Contact:** Jennifer.hester@monash.edu

**National Lead Clinicians Group (Transitions of care)**

Two funded projects were funded and completed in 2014,
Implementing care coordination plus early rehabilitation in high risk COPD patients in transition from hospital to primary care

Dr Kylie Johnston, Center for Palliative Care, St Vincent’s Hospital (Melbourne) Ltd

**Key messages**

> This pilot intervention generated a positive experience of both the process and outcomes of transition for COPD patients and their carers.
> This intervention avoided adverse events including emergency department presentations by patients in the early post-transition period.
> Only 1 in 10 (10%) of patients in the intervention group were readmitted within 28 days for a respiratory reason compared with 6/19 (32%) of controls.
> Objectively measured physical activity increased (time spent standing and walking) and time spent sitting decreased as a result of early rehabilitation in the context of transition care coordination. These improvements were not seen in the control group.

Pilot implementation of ICoPE: An innovative model to support patients with glioma and their carers across key care transitions

A/Prof Jennifer Philip, University of South Australia

An approach of building palliative care engagement at particular designated points in the illness course represents a means of enhancing patient and family caregiver support, improving end-of-life care, and reducing health care costs for all Australians with progressive, eventually fatal illness.

The positive preliminary results of this pilot implementation of the I-CoPE model into a tertiary Australian neuro-oncology service show promise for further testing via a randomised controlled trial and the potential for broader dissemination.

We attribute the preliminary success of this study on the underlying principle of a model based upon predefined transitions in the disease trajectory. Such an approach has application for other eventually fatal illnesses, whereby the timely introduction of supports according to points reached on a disease trajectory result in positive patient and carer outcomes.

Returning Home, Back to the Community from Custodial Care

Completed by returning Home, Back to the Community from Custodial Care

Related to transitions of care but more from a community care perspective that may involve primary health care services, APHCRI commissioned an evaluation of the Returning Home, Back to Community from Custodial Care program, funded by the Department of Health (and Ageing). Three Medicare Locals – Goldfields-Midwest (Geraldton) WA, Townsville QLD, and the Aboriginal Medical Service in Western Sydney – participated in the study.

The Returning Home project developed effective models of care to enhance the health and wellbeing outcomes of Aboriginal and Torres Strait Islander Women returning home from prison. This evaluation of three Medicare Local projects examined ways to deliver primary care services to Indigenous women leaving incarceration. The work was contracted to Muru Marri School of Public Health and Community Medicine, UNSW, and ended in July 2014.
Targeted Research and Capacity Building Programs

Sub-acute and Primary Health Care

The interaction of sub-acute care and primary health care can be defined as the “area of care that lies somewhere between inpatient hospitalization and long-term services” (Burns, 1994).

Five eighteen-month long projects commenced in 2014 and will be completed at the end of 2015.

Join the conversation: evaluating the effectiveness of experienced based co-design in improving the client experience of mental health transition across health sector interfaces.

Ms Kathryn Cranwell, Western Health (Victoria)

The Experienced-Based Co-Design (EBCD) research project, led by Western Health, focuses on working together with consumers of mental health services to improve their experience as they transition from sub-acute to primary care services and self-management support. The research project gathers the experience of consumers, their families and those who work in the industry and aims to promote service and systems integration to improve the consumer experience in the future.

The research targets consumers with mental health and complex health care needs who are frequent presenters to the emergency department and high users of health care. It is following their experience as they make the transition from sub-acute care to primary care services and gather ‘touch points’ (emotionally significant points) or opportunities to improve their experience.

Improving the ‘network planning and management’ of integrated primary mental health care for older people in rural regions

Professor Jeff Fuller, Flinders University

This project is aiming to validate and test a model for integrated primary health care centres to plan and manage the development of integrated primary mental health care for older people, using a participatory Plan-Do-Study-Act cycle. A rural region in South Australia is being used as a case study to examine the interaction between mental health services, primary health care, aged care and other community services as they seek to meet the mental health care needs of older people.

Functional decline in community-dwelling older people and the Medicare 75+ health assessments

Dr Karen Grimmer, University of South Australia

Functional Decline (FD) is the loss of ability to live independently and safely in the community. FD reflects increasing physical, social and cognitive frailty, and we know that age alone is not a good FD predictor. This project aims to understand why and how FD often goes unrecognised in the community until it is too late to arrest it, and how this can be rectified by better linkages between sub-acute and primary health care sectors. The focus is on people who are on the cusp of, or have incipient FD and are not receiving formal community supports to assist them to live independently and safely in the community.
REDIRECT: reducing older patients’ avoidable presentations for emergency care treatment

Professor Danielle Mazza, Monash University

This project aims to better understand the journey of older patients who present to ED unnecessarily and re-enter from primary health care to sub-acute or acute care by analyses of four highly relevant datasets: MAGNET (Melbourne East Monash General Practice Database), MMDS (Melbourne Medical Deputising Services) dataset, VEMD (Victorian Emergency Minimum Dataset), and DYNOPTA (Dynamic Analyses to Optimise Ageing) dataset. At the same time appropriate strategies for preventing patient re-entry from primary health care to sub-acute or acute care will be determined by rapid review methodology.

Enhancing health system interfaces: a study of experiences of sub-acute care patients, their carers & providers

Dr Edward Strivens, James Cook University

Hospital admissions for emergencies are increasing worldwide and the largest increases are for people over 65 years. The Geriatric Evaluation and Management (GEM) model of care is a national policy direction for multidisciplinary, coordinated care of older patients with multiple conditions and complex health care needs who present at the ED. There is compelling evidence that a GEM model of care is effective in reducing functional decline, mortality and discharge to residential aged care.

This project is using a qualitative methodology to examine the journey by older people presenting at ED who are referred to a GEM service and discharged to the community. It is examining service experience, needs and access to services from the perspective of patients, carers and service providers.

Integrated Primary Health Care Centres

The aim of this program of research was to improve integration, co-ordination and access to services and support professional training/education. APHCR is funding five projects under this Integrated Primary Care Centres Research Stream. The projects will be completed in late 2015.

Integrating care: organisational process, patient-centred outcome or both? Learning from first generation integrated primary health care centres

Professor Kirsty Douglas, the Australian National University

This project uses case studies in two award winning comprehensive primary health care centres with complex and vulnerable patient populations to systematically explore the formal and informal mechanisms that support integrated interdisciplinary practice for co-located primary care services.

The project views integration from two perspectives: as an organisational throughput or process and as a service or system outcome for the patient. In the former, integration refers to the clinical and administrative coordination undertaken by individuals and teams to deliver services in an 'integrated way': and can be described in terms of the processes which are enacted to achieve clinical goals, improve service access or system efficiency. In the latter, integration is perceived from the patient's
standpoint and reflects on the connectivity, alignment and coherence of the lived experience of service utilisation. Mixed qualitative methods including physical mapping, social network analysis, oral histories and patient journeys are being utilised to describe both organisational (processes) and the patient (outcome) perspectives.

**eHealth initiatives and health care integration in GP Super Clinics**
Professor Siaw-Teng Liaw, the University of NSW

This study aims to

1. Explore the extent to which the eHealth initiatives are implemented and used to support integration by the Integrated Primary Health Centre (IPHCs) an umbrella term for GP Super Clinics, Health One, GP Plus and extended GP Practices
2. Understand how eHealth initiatives and virtual networks are used in the IPHCCs to facilitate integration and integrated care globally
3. Understand the underlying mechanisms, barriers, enablers and contextual factors that have influenced the development and use of eHealth tools to support integration and continuity of care. A core principle is that eHealth supported and enhanced integration of inter-professional care must be organised around needs of patients and carers.

**Emerging models of integrated primary health care centres: their impact on access and integration of care and contributing factors**
Dr Julie McDonald, the University of NSW

Increasing rates of chronic illness within an ageing population are requiring increasingly accessible and well-integrated primary health care (PHC) services. Although there is some evidence that integrated Primary Health Centres (IPHCs) can improve access and integration, it is not currently known which types of IPHCs are best able to do this in the Australian context, the most effective approaches for them to adopt, or what aspects of government policy best support it. This study will show how successful different types of IPHCs are at maximising access and integrating care, the strategies they use and how this can be supported through policy.

**Principles and practice of primary health care integration: Learning and up-scaling results from a regional GP Superclinic**
Professor Susan Nancarrow, Southern Cross University

The literature demonstrates that patients are less likely to access prescribed health and medical services when this involves them going through multiple steps. Therefore, having co-located services, and streamlined referral processes not only makes life easier for health and medical consumers, but should improve community health outcomes.

This case study of the Lismore General Practitioners Superclinic (LGPS) is exploring how primary health care services are integrated at the patient, service and system level by looking at patient referral networks and referral pathways (service-level integrations and how the Superclinic is
integrated with the wider regional community (systems-level integration), to assess how far these networks spread and their density with regard to populations with particular demographic characteristics.

**Analysis of the supports and hindrances to the integration of co-located services in multiple models of primary health care delivery**

Professor Nigel Stocks, the University of South Australia

This research project is investigating mechanisms supporting and hindering health service integration in community and primary health by examining different co-location models that are representative of the diversity of models operating throughout Australia. How integration is operationalised will be explored across six participating case study site centres within the co-located service sites (medical, allied and any social or specialist services), as well as examining extent of integration with other levels of care external to the case site.

**APHCRI@ANU research**

The key focus of APHCRI@ANU is understanding variation in health care. Not all Australians have the same health problems, and even when they have the same health problems, do not have the same access to care, receive the same level or types of services, or achieve the same health outcomes.

However, not all variations are harmful. Indeed a major challenge for researchers and practitioners alike is to identify which variations in service provision or care outcomes are warranted and which are not warranted, and which can be addressed through policy and practice.

The research undertaken at APHCRI@ANU in 2014 was grouped into four key streams:

1. The nature and distribution of primary health care related variations
2. The causes of variations in primary health care needs, access, care and outcomes
3. How to address variations in primary health care needs, access, care and outcomes through innovations in policy and practice
4. How to measure and monitor variations in needs, access, care and outcomes over time

**Stream 1: The nature and distribution of PHC related variations**

Variations arise in all health care service provision and outcomes. Studies of spatial variation in health care provision and costs in the USA have shown wide and unexplained diversity. To better understand the nature and distribution of primary health care related variations, APHCRI@ANU researchers have explored a broad range of areas including, spatially based variation, adherence to medication, use of chronic disease management plans, time spent on personal health care and how this relates to multi-morbidity, patient experience with health care, and patient affiliation with General Practitioners.

To support research across Australia on spatial variation, APHCRI@ANU established the National Centre for Geographic and Resource Analysis in Primary Health Care (GRAPHC) in 2011 using core funding of $2.6m over three years. This cutting edge resource provides relevant data, analysis and
mapping tools to primary health care researchers. GRAPHC now supports a web-based data management and mapping facility with 6,000 indicators and highly flexible tools for mapping both this data and data which researchers themselves may wish to visualise.

GRAPHC includes ABS-based data on population and socio-economic status, data compiled by the Population Health Information Development Unit, University of Adelaide, and data at a Medicare Local level from the MABEL Australian General Practitioner workforce survey.

Recognising the value of collaboration and developing national and international partnerships, APHCRI@ANU researchers have forged links with many institutions including, the Netherlands Institute for Health Services Research; Robert Graham Centre, Washington DC; University of Canterbury, NZ; University of Northumbria, UK.

For more information, visit http://aphcri.anu.edu.au/research/groups/quantitative-analytics

Stream 2: The causes of variations in PHC needs, access, care and outcomes

Consistent with the most significant challenges facing the primary health care sector, work in this area has a strong focus on chronic illness.

Chronic illness challenges the budgets and health systems of all western countries, where health services oriented towards the care of acute and episodic conditions are forced to find new models of care; where health care providers face changes to their traditional ways of working with the need to integrate care across multiple settings and providers, and where the burden of the illness to patients and their families is beginning to be counted and incorporated into models for best management and shared decision making.

Alongside practice and policy interventions, we have limited knowledge of how patient characteristics and needs vary within and between conditions, the extent to which regional variations occur in the use of allied health and dental services or access to a same day appointment with a General Practitioner, or how chronic conditions impact on time use and out of pocket costs contribute to variation in access.

APHCRI@ANU researchers have focused on these knowledge gaps using data from the Menzies-NOUS Survey of Attitudes of Australians towards the health system, the Serious and Continuing Illnesses Policy and Practice Study (SCIPPS), and a national survey of members of National Seniors Australia, National Diabetes Services Scheme and the Lung Foundation.

National and international collaborations and partnerships with APHCRI@ANU researchers include, the University of Manchester, the University of Exeter, Hull and York Medical School, Menzies Centre for Health Policy; the Health Care Consumers Association; and, National Seniors Australia.

For more information, visit http://aphcri.anu.edu.au/research/groups/chronic-disease-management

Stream 3: How to address variations in PHC needs, access, care and outcomes through innovations in policy and practice

Strong primary health care systems that promote access, continuity and coordination of care are associated with improved population health and cost performance. A major challenge for health
systems is how to redesign primary health care to make care more accessible, continuous, coordinated and patient centred.

This is a particular challenge for organisations providing care for people with mental health or chronic conditions where care must be accessed from a range of providers within and outside the primary health care sector. It is particularly vital in reaching underserved populations and those whose needs have not traditionally been well met.

Working together with key consumer, service and policy stakeholders is essential to tailor intervention research and to support uptake of knowledge into practice since changes in population health outcomes cannot occur unless health care systems, organisations, and professionals adopt them in practice.

This area of research focuses on developing and testing innovative strategies for improving access and quality within the Australian primary health care sector. It incorporates work with both consumers and primary health care providers, including Aboriginal and Torres Strait Islander services, general practices and community health.

Much of the work undertaken by APHCRI@ANU researchers has been conducted through consultancies or in partnerships with key stakeholder groups and has informed the development of new areas for applied research.

Linkages have been formed with the Aboriginal Health Council of Western Australia, the Queensland Aboriginal and Islander Health Council, the ACT Medicare Local, the Australian Medicare Local Alliance, ACT Health, Menzies Centre for Health Policy, and the University of Manchester.

For more information, visit http://aphcri.anu.edu.au/research/groups/consumer-perspectives-primary-health-care

**Stream 4: How to measure and monitor over-time variations in PHC needs, access, care and outcomes**

Monitoring access to services and patient outcomes and experiences is essential for improving quality, stimulating innovation in the design and delivery of health care and improving accountability.

To function effectively and fulfil both system and service-oriented sets of objectives, measures need to address aspects of health care performance that are of relevance to consumers and that are also aligned with measures of organisational and service performance that can be influenced by providers.

The means by which such information might best be collected, analysed and reported to promote the overall standard of care and reduce variation between settings is the subject of research among primary health care providers and consumer advocates in Australia, as it is internationally.

A key emerging area of interest is the use of outcomes based funding to promote quality and efficiency and the governance and other arrangements that are required to support accountability in this context.

For more information, visit http://aphcri.anu.edu.au/research/groups/aphcri-ahcwa-indigenous-research-partnership
**Tasmanian sub-acute Pathways Research Project**

The Project identified current pathways and barriers, gaps and system inefficiencies, and identified practical strategies to address these to improve post-hospital sub-acute care in terms of health outcomes, patient experiences and efficiency of service utilisation. At every stage, this work involved consultation with all the relevant stakeholders.

Data analysis indicated that Tasmania is relatively under-resourced to provide inpatient sub-acute care compared with other jurisdictions nationally. This is in spite of compelling evidence that conditions leading to sub-acute admissions are more common in Tasmania due to the higher median age of the population and a greater chronic disease burden compared with other jurisdictions.

Delays in transfer of some patients to sub-acute / post-hospital care mean the acute length of stay is unnecessarily extended in some cases. However both rural hospital and community nursing skills appear to be under-utilised and to have capacity to accept a larger, higher-acuity caseload from the large acute hospitals.

Focus groups indicated that providers wanted better systems and supports to improve sub-acute care. The recommendation from this research and from consultation with stakeholders was for an evidence-based, systematic approach to integrating rural hospitals and community nursing service into acute systems, using community nurse-led in-reach to get patients into appropriate sub-acute / post-hospital care. The nurse-led in-reach effort was targeted to older patients with defined chronic conditions whose length of stay in acute care exceeded 10 days. This recommendation was accepted by the Tasmanian Department of Health and Human Services and has been implemented, initially at the Royal Hobart Hospital and more recently at the Launceston General Hospital. Work is underway to adopt the initiative at the Burnie General Hospital.

**Coordination and the vulnerable consumer health care research stream**

**Partnerships in care: attributes of successful care coordination models which improve health care networks for people with intellectual disability**

Associate Professor Lucie Kaye Walters, Flinders University Rural Clinical School

This study focused on the provision of coordinated care for people with intellectual disability who live in rural towns, as well as their carers and/or other close advocates. People with intellectual disability are a neglected community with high rates of mortality and chronic disease, but little progress has been made in overcoming the difficulties of providing care for them. Researchers aimed to inform policy through the development and testing of a conceptual model for the implementation of a coordinated care program. Researchers reviewed the mechanisms that contribute to improved health outcomes under the Coordinated Care Demonstration Project delivered in Ararat, Victoria. Using this data, researchers developed a conceptual model for coordinated care which was implemented and tested in the Riverland, SA.

**The impact of a Rapid Equity Focussed Health Impact Assessment (EFHIA) on local planning for after-hours care to better meet the needs of vulnerable populations**
Dr Elizabeth Harris, Centre for Health Equity Training, Research and Evaluation, UNSW

The Equity Focussed Health Impact Assessment (EFHIA) is a mechanism used to assess the consequences of a proposed policy, program or project on the specific needs of vulnerable populations, in order to minimise unfair or unjust differential impacts between population groups. This project aimed to develop and evaluate EFHIA as a practical tool for Medicare Locals and Local Health Districts to use in modifying their service plans to engage vulnerable groups and address their needs. Researchers piloted the use of the EFHIA in implementing after-hours services by four Medicare Locals. They evaluated the impact on these Medicare Locals’ final service plans, in comparison with Medicare Locals which do not use EFHIA to assess service plans.

Overcoming barriers for transitioning vulnerable clients from targeted programs to mainstream primary care

Associate Professor Virginia Lewis, Australian Institute for Primary Care & Ageing, La Trobe University

This project examined how people from vulnerable groups establish and maintain care networks, and how health care services can engage and encourage people from vulnerable groups to manage their health care in the most effective manner over the long term. Researchers identified strategies to support smooth transitions for vulnerable consumers from specialist health services to mainstream services as their needs and/or circumstances change, by studying the transition of refugees from the Western Region Health Centre’s Refugee Health Program to mainstream general practices. Researchers aimed to develop a framework of the barriers and facilitators for providers, consumers and service managers, and to describe its general applicability according to different service characteristics. The findings assisted key service providers and planning bodies such as Medicare Locals in developing a sustainable, coordinated and systematic approach to meeting the needs of vulnerable consumers.

Coordinated primary health care for refugees: a best practice framework for Australia

Professor Grant Russell, Southern Academic Primary Care Research Unit, School of Primary Health Care, Monash University

A number of models of care have evolved across Australia to address the complex health and social welfare needs of refugees. Refugees often require multiple service providers and struggle to receive coordinated care because of problems with health service integration and inadequate community support. This study evaluated how effective the current models of care are in delivering accessible, high quality, coordinated care for refugees. In particular, the study examined existing models of primary health care delivery for resettled refugees, and evaluated the effectiveness and feasibility of these models of care. Researchers aimed to develop an evidence based framework for delivering refugee health care, and to develop a strategy for the implementation of this framework across Australia.
Y Health – Staying Deadly

Dr Annapurna Nori, Watto Purrunna Aboriginal Health Services

At the time of the study, Aboriginal youths could access either the Child Health Check (under 14 years old) or the Adult Health Check (15 years or older) under the Medicare Benefits Schedule Items, but there was no dedicated Youth Health Check to meet their specific developmental and health needs. A comprehensive Aboriginal youth assessment tool was necessary, as young people often under-utilise primary health care, are reluctant to seek help for health problems and seldom receive counselling about risky behaviours when they do. This project aimed to develop and embed an evidence-based Aboriginal Youth Health Check within a Continuous Quality Improvement cycle. The Health Check was used as a basis for a planned step-wise design for service delivery with community involvement and strategic use of existing resources. A further aim of the project was to establish research capacity within an Aboriginal primary care setting.

How can the primary health care system better support Aboriginal people released from prison?

Dr Jane Elizabeth Lloyd, Centre for Primary Health Care and Equity, UNSW

Aboriginal Australians transitioning from the criminal justice system to the community require immediate and consistent long-term support in order to adapt back to family and community life. Instead of support, however, Aboriginal Australians are often faced with entrenched forms of racism which serve to exclude them from full participation in society. As such, there is a need to explore the ways in which primary health care can better meet the health care and social support coordination needs of Aboriginal Australians transitioning from prison to the community. Researchers studied multiple perspectives from the Aboriginal community, from theoretical and empirical evidence, and from practitioners, service providers and policy officers. Researchers aimed to develop culturally specific understandings of how primary health care services can better support the health and social needs of Aboriginal Australians, and from there, expand these understandings into practical models for coordinating the needs of Aboriginal Australians transitioning from the criminal justice system into the community.
Attachment 2: References


Parker, R., et al., *How acceptable are primary health care nurse practitioners to Australian consumers?* Collegian: Journal of the Royal College of Nursing Australia, 2013. **20:** p. 35-41.


