Understanding variation in primary health care

ANU College of
Medicine, Biology
& Environment
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Understanding variation in primary health care
The Australian Primary Health Care Research Institute

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FOREWORD

The Australian Primary Health Care Research Institute (APHCR) was established at the ANU in 2003 as part of the Australian Government Department of Health and Ageing funded Primary Health Care Research and Education Development (PHCREd) Strategy. Since then, APHCRI@ANU has established itself as a leading Australian centre for health services 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 is grouped into four key themes:

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

This research portrait highlights the innovative and inspiring range of work undertaken by APHCRI@ANU researchers across a broad range of areas to inform policy makers, health care providers and consumers.

Associate Professor Lyndall Strazdins
Head, APHCRI@ANU
STREAM 1
THE NATURE AND DISTRIBUTION OF PRIMARY HEALTH CARE 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 ties with many institutions including, the Netherlands Institute for Health Services Research; Robert Graham Centre, Washington DC; University of Canterbury, NZ; University of Northumbria, UK.

The GRAPHC team have developed G-Tag: a system to manage individual clinical data that preserves privacy and confidentiality. For more information visit: http://aphcri.anu.edu.au/research/groups/quantitative-analytics
**PROJECT SPOTLIGHT**

**MAPPING A HIDDEN MENACE: UNDIAGNOSED DIABETES**

Taking such an innovative approach has led to the award of a DECRA fellowship to Dr Bagheri for research on identifying the spatial distribution of chronic illness risk.

Research Team

- Dr Nasser Bagheri
- Dr Ian McRae
- Mr Paul Konings
- Prof Kirsty Douglass
- Dr Peter Del Fante
- Prof Robert Adams

This innovative study used both sophisticated modeling and spatial analysis of General Practice clinic-level data to identify a distinct pattern of undiagnosed diabetes that varied by area and socioeconomic status.

The pattern could not have been detected using traditional postcode based data. It was made visible using small area data extracted using the purpose designed GRAPHIC G-Tag tool.

This study reveals that undiagnosed diabetes may be a problem of less disadvantaged social groups, and geospatial mapping provides a new tool to identify areas with high levels of unmet need. Using our models, policy makers can apply geographic targeting of effective interventions.


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**Discussion**

**MAPPED IN A HIDDEN MENACE: UNDIAGNOSED DIABETES**

The prevalence of undiagnosed diabetes was slightly higher in the least disadvantaged area, probably in part at least due to the focus on diabetes over the last decade. Dr Bagheri has been working with the Australian National University to apply geographic targeting and develop innovative strategies.
STREAM 2
THE CAUSES OF VARIATIONS IN PRIMARY HEALTH CARE 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.

Health systems world-wide have attempted to create greater standardisation of care for common chronic illnesses to reduce outcome variation.

For more information visit:
http://aphcri.anu.edu.au/research/groups/chronic-disease-management
The onset of severe chronic illness and its progression poses a ‘critical situation’ to the individual. It is experienced as disrupting people’s previously held beliefs and imaginations about their future biographies. The chronically ill individual, Bury suggests, is not subject to the same social obligations of the individual with acute sickness (who should return to health quickly and get back to work). Instead, the very nature of chronicity suggests that the individual cannot return to prior ‘healthy’ modes of social obligation.

Chronic Illness creates uncertainty and calls into question the individuals previously held ideas about the world and their future.

First, there is the disruption of taken-for-granted assumptions and behaviours; the breaching of commonsense boundaries … Second, there are more profound disruptions in explanatory systems normally used by people, such that a fundamental rethinking of the person’s biography and self-concept is involved. Third, there is the response to disruption involving the mobilisation of resources in facing an altered situation (Bury, 1982: 169-170).

The initial ‘breach’ in boundaries brings into focus the misleading and even ‘dis-appearing’ body (Williams, 2000). Previously trusted and often unconscious rhythms of the healthy body are disrupted. The chronically ill person feels profoundly in the body and in relation to social life.

Responses to the theory – research participants

Responses to the theory - research participants...
STREAM 3
HOW TO ADDRESS VARIATIONS IN PRIMARY HEALTH CARE 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.

Sustainability of innovation is an ongoing implementation and evaluation challenge for the primary health care sector.

For more information visit: http://aphcri.anu.edu.au/research/groups/consumer-perspectives-primary-health-care
The purpose of this research was to explore information continuity in Australian primary care to assist decision makers in developing effective policy for coordination of care.

Care coordination is a key focus of current health policy in Australia. Continuity of care - an aspect of coordination of care - is the patient’s experience of care over time. It is often described in terms of three dimensions: information, relational and management continuity.

This study aimed to (1) explore how information continuity supports coordination; and, (2) investigate conditions required to support information continuity.

Four diverse Australian primary health care initiatives participated in the study. Each with improved coordination as an aim or fundamental principle. Practitioners, managers and decision makers who could provide insight into the use of information for continuity and coordination of care were interviewed.

The study found that availability of information is not sufficient to ensure continuity of care for the patient or coordination of care from the systems perspective. Policy directed at information continuity must give consideration to the broader ‘fit’ with management and relational continuity and provide a broad base that allows for local responsiveness in order for coordination of care to be achieved.

For more information visit: https://researchers.anu.edu.au/researchers/banfield-ma
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 fulfill 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 organizational 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.
**PROJECT SPOTLIGHT**

**CONTINUOUS CARE IMPROVEMENT IN ABORIGINAL COMMUNITY CONTROLLED HEALTH SERVICES: AN INDIGENOUS RESEARCH PARTNERSHIP**

Research Team

- Dr Karen Gardner
- Assoc Prof Beverly Sibthorpe
- Dr Justin McNab
- Ms Kanupriya Kalia Hehir

In 2012, the Continuous Care Improvement project was developed under the Indigenous Research Partnership between APHCRI@ANU and the Aboriginal Health Council of Western Australia (AHCWA).

The current and ongoing project tests the feasibility of embedding a new model of Continuous Quality Improvement (CQI) in six Western Australian Aboriginal Community Controlled Health Services.

The model involves the nomination of a ‘Quality Lead’ person in each service and the use of information technology to implement three core components:

- mentor supported online training and practice;
- rapid Plan-do-Study-Act (PdSA) cycles; and
- AHCWA-based clinical governance support for uptake of evidence in services and communities.

There has been a decade of investment in CQI in Aboriginal and Torres Strait Islander primary health care services. However, CQI activities have not been embedded in everyday practice in many services.

The key question the evaluation aims to address is: Can a multi-faceted continuous care improvement program that incorporates (1) community controlled clinical governance, (2) rapid PDSA cycles and (3) information technology be implemented, embedded and integrated at the service level?

Further questions include:

- Which factors influence service capacity?
- Does the program improve health service performance in the delivery of health assessments, smoking prevention, sexual health and ear health?
- Can this be achieved at reasonable cost?

For more information visit:

http://aphcri.anu.edu.au/research/groups/aphcri-ahcwa-indigenous-research-partnership
NATIONAL CENTRE FOR GEOGRAPHIC & RESOURCE ANALYSIS IN PRIMARY HEALTH CARE (GRAPHC)

Research Team
> Dr Ian McRae
> Paul Konings
> Michael Hewett
> Dr Nasser Bagheri
> Dr Soumya Mazumdar
> Le Ma
> Lisa Cornish

GRAPHC was established in 2011 to support geographic and location-based aspects of primary health care research. It aims to promote and facilitate the use of geographically based data and analytical tools to develop the evidence base for research into the primary health care system in Australia.

Geographic Information Systems (GIS) are ideal tools for analysing disparities in health outcomes, availability of services, environmental risks, workforce shortages and other contemporary issues in primary health care.

GRAPHC’s tools allow users to view, compare, extract and investigate data, and upload their own data without compromising confidentiality. The tools are free to use and are available on the GRAPHC website.

GRAPHC actively engages with researchers nationally, supporting a variety of activities including geo-attribution, workforce analysis, medical student mapping, spatial aggregation, sample stratification and visualisation and mapping for reports and journals.

Informing locally relevant and equitable solutions for targeting health resources and services

For more information visit:
http://graphc.aphcri.anu.edu.au