**Concurrent paper sessions, Wednesday, 3.45 pm**

1. **Chronic disease management 1**

**Chronic disease management items in general practice: a population-based study of variation in claims by claimant characteristics**

*Kirsty Douglas¹, Laurann Yen³, Rosemary Korda², Marjan Kljakovic¹, Nicholas Glasgow¹*

¹Australian National University Medical School, ²National Centre for Epidemiology and Population Health, ³Menzies Institute for Health Policy, ANU

**Aims and rationale**

To describe how Medical Benefits Schedule (MBS) chronic disease (CD) item claims vary by sociodemographic and health characteristics in people with heart disease, asthma or diabetes.

**Methods**

A cross-sectional analysis of linked unit-level MBS and survey data from the first 102,934 participants enrolled in the 45 and Up Study, a large-scale cohort study in New South Wales, who completed the baseline survey between January 2006 and July 2008.

**Findings**

The proportion of individuals making claims for MBS CD items was 18.5% for asthma, 22.3% for heart disease, and 44.9% for diabetes. Associations between participant characteristics and a claim for a CD item showed similar patterns across the three diseases. For heart disease and asthma, people most likely to claim a CD item were women, older, of low income and education levels, with multiple chronic conditions, fair or poor self-rated health, obesity and low physical activity levels. The pattern of claims was slightly different for participants with diabetes in that there was no significant association with number of chronic conditions, smoking or physical activity.

**Implications for policy and practice**

Many with self-reported CD do not claim CD items. People with diabetes and individuals with greatest need based on health, socioeconomic and lifestyle risk factors are the most likely to claim CD items. The greatest uptake occurs in diabetes, where the evidence to support structured and multidisciplinary care is strongest, suggesting GP’s are more likely to adopt policy supported by evidence.

**Risk factors for infection after dermatological surgery in general practice**

*Clare Heal⁴, Petra Buttner¹, Herwig Drobetz³ *

³James Cook University

**Background**

Surgical site infection following minor surgery contributes to patient morbidity and compromises the cosmetic outcome. The purpose of this study was to determine the incidence of and risk factors for surgical site infections after dermatological surgery in general practice.

**Methods**

A prospective, observational study which assessed infection among 972 patients was conducted in regional north Queensland, Australia. Consecutive patients presenting for minor skin excisions were invited to participate. Wounds were assessed for surgical site infection at the time of removal of sutures.

**Results**

Infection occurred in 85 of the 972 excisions: the overall incidence of infection was 8.7% (95%-confidence interval = [6.5, 11.0]). Excisions from the upper extremities (p<0.001) or lower extremities (p<0.001), excisions of Basal Cell Carcinoma (BCC) (p = 0.001) or Squamous Cell Carcinoma (SCC) (p = 0.001) and re-excision of a skin cancer were found to be independent risk factors for wound infection. The length of the excision (p<0.001) and being an ex-smoker (p=0.019) were additional independent risk factors for infection. Diabetes was not found to be an independent risk factor for infection (p=0.891).

**Conclusions**

Antibiotic prophylaxis is probably prescribed excessively or inappropriately for dermatological surgery and overall we wish to discourage their use. The results of this study could encourage the more judicious use of prophylactic antibiotics by defining high-risk procedures such as excisions from the extremities, excision of BCC or SCC, larger excisions, and high risk patients such as ex-smokers.

---

*Kirsty Douglas is Associate Professor of Clinical Education at the ANU Medical School. She is a GP clinician working in Indigenous Health in the ACT. Her research interests include health services research, GP workforce issues, Indigenous health, chronic disease management and social determinants.*
Using social network analysis to increase referrals between GPs and LRF services

Wendy Oakes¹, Peter Carswell², Brian Hill³, Paul Stephenson²
¹Heart Foundation, ²Synergia Ltd, ³Cordelta Ltd

Aims and rationale
The Prevention in Primary Health Care Project is a three-year quality improvement program aimed at building capacity in general practices to refer patients with chronic diseases to services which can help them reduce their lifestyle related risk factors (LRF). This study uses social network analysis to characterise and measure the multidisciplinary networks operating in referral by five general practices in three Divisions of General Practice, in order to identify opportunities to enhance network collaboration.

Methods
Health professionals in each practice were asked to nominate which LRF services they used. In relation to each identified LRF service, they were then asked four questions to measure network ties based on awareness, referral, communication and advice seeking practices. The data was analysed using the Synergia Network Analytic platform, an evidence based tool which uses advanced mathematics and social network analysis to produce measurable network indicators.

Findings
Network analysis showed that not all LRF services nominated by the practices as part of their network had active ties and that the network was dominated by three services with strong ties. The three services (which according to network theory may provide the greatest influence on general practice) were those that already had links with practices for other reasons or had been highly advertised.

Implications for policy and practice
In real life social networks often operate differently from their formal structures. Better understanding of professional social networks provides higher quality data on which to base policies and intervention strategies aimed at supporting and enhancing the work of the network.

Patient’s knowledge of their chronic disease: the influence of sociodemographic characteristics

Annabelle Forrest¹, Caroline Laurence¹
¹University of Adelaide

Aims and rationale
The study aims to determine which demographic, socioeconomic and burden of disease factors are associated with patient’s knowledge or lack of knowledge of their chronic disease, specifically diabetes, hyperlipidaemia and those prescribed anticoagulant therapy.

Methods
The study will analyse data from 4968 patients who participated in the Australian PoCT in GP trial Australia. Presence of a condition will be obtained from patient self-report in a questionnaire compared to the GP’s assessment. Sociodemographic factors (eg. age, sex, ethnicity, educational level and socioeconomic status) and burden of disease factors (eg. co-morbidities, smoking status and alcohol consumption) will be obtained from the questionnaires. Multiple logistic regression analysis will be used to determine associations between sociodemographic factors and agreement between GP and patient’s report of the condition.

Findings
Disagreement between the patient’s and GP’s assessment of their condition occurred for 28% of patients with hyperlipidaemia and 23% of patient’s prescribed anticoagulants. However, such disagreement occurred for only 6% of diabetics. Data will be presented on associations between these results and sociodemographic and burden of disease factors.

Implications for policy and practice
The study will provide insight into how sociodemographic factors influence the patient’s understanding of their chronic condition. The results can be used at many levels: firstly it can be used to assist GPs to recognise which patients may misunderstand their chronic conditions; secondly, to inform the design of patient education programs; and finally, as health literacy is fundamentally important in effective self-management, to improve chronic disease models of care.

Wendy Oakes is the Primary Health Care Program Manager for the Heart Foundation NSW. Prior to this position she was Tobacco Control Manager for the Cancer Council NSW. She has a BSc, MPH (Hons) and is currently completing a Master of Qualitative Health Research at Sydney University.

Dr Annabelle Forrest is an Academic Registrar at Adelaide to Outback and University of Adelaide. She has a strong interest in communication and self-management of chronic disease. Annabelle is working to develop her research skills while continuing clinical practice.
2 Mental health care

'I wish I had a map': constructing diagnostic frameworks for patients with medically unexplained symptoms in general practice

Louise Stone1,2,3
1GPET, 2Centre for Values, Ethics and the Law in Medicine, University of Sydney, 3RACGP FMCER grant

Aims and rationale
Patients with multiple medically unexplained symptoms (MMUS) have high prevalence and morbidity in general practice. They often experience a complex mix of chronic illness, psychosocial trauma and interpersonal difficulties. Existing categorical diagnoses in these patients are unhelpful, leaving GPs without language or frameworks to understand and manage their distress. Doctors find these patients frustrating to manage, and patients often describe feeling unsupported and unheard. This study aimed to construct a model of clinical reasoning based on frameworks, rationales and processes utilised by GPs when assessing and managing patients with MMUS.

Methods
Using Charmaz’s constructivist grounded theory methodology, I conducted semi-structured interviews with 24 GPs from five states and a range of clinical contexts. Analysis was conducted inductively, with data collection and analysis occurring concurrently.

Findings
Participants expressed an ethical commitment to managing suffering in the absence of diagnosis, but struggled with several core dilemmas, including:

- managing negative feelings while providing a helpful therapeutic alliance
- managing time and resources
- validating suffering without ‘medicalising misery’
- excluding serious disease while avoiding over-investigation and treatment
- finding helpful diagnostic frameworks while avoiding stigmatising labels
- using referrals effectively without entrenching the patients in a web of specialist investigations and treatment.

Implications for policy and practice
Patients with MMUS and no diagnosis experience significant suffering. Improving outcomes with these patients requires diagnostic frameworks, research methodologies and outcomes and educational strategies to assist GPs in managing this difficult area of practice.

Dr Louise Stone is a PhD candidate in the Department of Values Ethics and the Law in the Faculty of Medicine, University of Sydney. Her research interest is in the clinical reasoning of GP novices and experts when patients present with mixed emotional and physical symptoms.

Interdisciplinary collaboration in Australian primary mental health care: an evaluation of a national initiative

Justine Fletcher1, Kylie King1, Anna Machlin1, Jo Christo1, Bridget Bassili1, Grant Blashki2, Jane Pirkis1
1The Centre for Health Policy, Programs and Economics, University of Melbourne, 2The Nossal Institute for Global Health, The University of Melbourne

Aims and rationale
Funded by the Australian Federal Government, the Mental Health Professionals Network (MHPN) aimed to foster interdisciplinary collaborative primary mental health care. Three inter-related areas were utilised by MHPN to achieve their aim: running interdisciplinary workshops supported by education and training materials; fostering ongoing, self-sustained interdisciplinary clinical networks; and hosting a website, web portal and toll-free information line. The evaluation aimed to establish whether MHPN met various objectives throughout each stage of development.

Methods
A large scale independent evaluation of MHPN activities was undertaken between July 2009 and July 2010. The evaluation was multifaceted and utilised uptake data, web-surveys and focus groups with mental health professionals and MHPN staff. Together the evaluation team and MHPN agreed upon a program logic against which to assess the progress of the MHPN project across four phases: establishment, delivery, sustainability and long-term.

Findings
There were 11,930 mental health professionals who attended 1,200 workshops. Four fifths of these professionals joined ongoing local networks which are supported by MHPN to ensure sustainability. Survey data demonstrated that professionals’ attitudes and behaviour regarding interdisciplinary networking significantly changed after their involvement in MHPN activities. The evaluation demonstrated that MHPN achieved all of the objectives through the establishment and delivery phases and was well placed to achieve the sustainability and long-term objectives.

Implications for policy and practice
The evaluation findings have informed the ongoing operation of the MHPN and are also relevant to others interested in facilitating interdisciplinary collaboration.

Justine Fletcher is a research fellow with the Centre for Health Policy, Programs and Economics at the University of Melbourne. She has been involved in a number of evaluations of national mental health initiatives and is also a registered psychologist.
**Between pillar and post: a qualitative study into accessibility of services for persons with a dual diagnosis of acquired brain injury and mental illness**

Caroline Bulsara¹,², Errol Cocks², Julie Netto², Annalise O’Callaghan³

¹Brightwater Care Group, ²Curtin University

**Aims and rationale**
The main aim of this study is to identify the facilitative elements of an effective post discharge rehabilitation and recovery pathway for people with a dual diagnosis of an acquired brain injury (ABI) and mental illness (MI). The focus of the research is on describing the lived experiences of consumers and their families/carers in a manner that can guide policies and service practices.

**Methods**
A phenomenological study using in-depth interviewing technique was used with eight cases who were a combination of the person with a dual diagnosis, their primary carer and/or a case manager. Areas explored during the interviews were around negotiating one’s way around the health system and barriers and facilitators to recovery and living optimal quality of life.

**Findings**
Persons with a dual diagnosis of ABI and mental illness and those supporting them found that the system provided few opportunities to engage with the community outside of an institution. Persons were either categorised with ABI or mental illness but rarely supported for both within the community leading to longer term problems of integration and social isolation.

**Implications for policy and practice**
The primary health care system needs to engage with other providers and to work in an intersectoral way in order to provide ongoing support and optimal quality of life for affected individuals.

---

**What is the impact of persistent suicidal thinking on health outcomes and health service use in a primary care cohort with depressive symptoms?**

Aves Middleton¹, Jane Gunn¹, Konstancja Densley¹, Gilles Ambresin¹, Patty Chondros¹

¹The University of Melbourne, Australia, ²University of Lausanne, Switzerland

**Aims and rationale**
Suicide prevention is a major public health issue. General practitioners have an important role in the management of suicidality. Little is known about how suicidal thinking changes over time, as individuals experiencing suicidality are often excluded from RCTs due to their high risk. This study aims to document the extent to which suicidal thinking is persistent over time and whether persistent suicidal thinking is related to poorer health outcomes and increased health service use.

**Methods**
Diamond is a longitudinal cohort study following 789 primary care participants with depressive symptoms from 30 general practices across Victoria, since 2005. Participants completed a series of validated depression and sociodemographic measures including: PHQ-9, CES-D, and WHOQOL-Bref at baseline, 3, 6, 9, and 12 months follow-up.

**Findings**
Of the 789 participants, nearly 10% at any time, experienced thoughts of ‘being better off dead for more than half the days over a two week period’. Consistent suicidal thoughts were mainly experienced by those who were currently depressed on the CES-D. Almost 5% of the cohort reported persistent suicidal thinking over the first 12 months. A full report of findings will be presented at the conference.

**Implications for policy and practice**
The findings of this study will be fed back to the Mental Health Professional Network and Medicare Locals managing the ATAPS suicide prevention strategy, to inform and influence future management of people experiencing suicidal thoughts in primary care.

---

Dr Caroline Bulsara is currently the inaugural director of a newly established research centre within the Brightwater organisation and has been engaged in the setting up of this centre for the past year. Brightwater provides community based services to persons with Acquired Brain Injury

---

Aves Middleton, BHlthSc coordinates the Diagnosis, Management and Outcomes of Depression in Primary Care (diamond) longitudinal project. Her research interests include mental health research and clinical research management.
3 Healthy ageing 1

'A particularly difficult diagnosis to make': factors that facilitate GP diagnosis of dementia

Dimity Pond1, Karen Mate1, Jill Phillips1, Susan Goode1, Nerida Paterson1, Parker Magin1, Henry Brodaty2, John Marley1, Nigel Stocks3, Cate Howell3

1University of Newcastle, 2University of New South Wales and Dementia CRC, 3University of Adelaide

Aims and rationale
In Australia dementia prevalence is expected to grow from 267,000 in 2011 to 942,000 by 2050. GPs identify around 50% of cases in Australia and internationally. This paper will examine predictors of an accurate diagnosis by the GP.

Methods
The team undertook a multi-centre randomised controlled trial of a GP educational intervention about dementia, aimed at improving rates of dementia identification. Patients were recruited through their GP. Dementia was identified at a home visit by a research nurse who included the CAMCOG-R as a gold standard for diagnosis, and questioned whether the patient had mentioned memory problems to the GP. GPs audited consenting patients, indicating whether they had possible, probable or definite (PPD) dementia. Analysis reports likelihood ratios and p-values using logistic regression.

Findings
A baseline GP audit was completed for 1,974 (97.5%) of enrolled patients. GPs correctly identified 45% of 164 patients with CAMCOG-R dementia (prevalence 8.3%) and incorrectly identified 10% of 1810 patients without dementia, giving a positive predictive value of 29% for PPD-dementia. A lower CAMCOG-R score was significantly associated with a diagnosis of PPD-dementia. Memory complaints increased the likelihood of dementia by 2.46 times. For such patients, GPs were more likely to identify PPD-dementia in both demented and non-demented groups. Other factors predictive of GP diagnosis will also be reported.

Implication for policy and practice
GPs use a number of patient cues when diagnosing dementia. The paper will examine likelihood ratios as a mechanism for assisting GPs to use these cues more effectively.

The integrated systematic care for older people (ISCOPE) study

Jeanet Blom1, Wendy den Elzen1, Margot Heijmans1, Anne van Houwelingen1, Jacobijn Gussekloo1

1Department of Public Health and Primary Care, Leiden University Medical Center

Aims and rationale
The number of older people with a combination of somatic, functional, mental or social problems is rising. Although a pro-active way of working by GPs is advocated, the feasibility and cost-effectiveness is yet unknown.

Aim: the introduction of a structural monitoring system to detect older people of ≥75 years with a combination of problems (complex problems). For those with complex problems a care plan is executed.

Methods
The ISCOPE-study is a cluster randomised trial with the aim to measure the (cost)effectiveness of a screening questionnaire to identify older people with complex problems, followed by a care plan. All older persons of ≥75 years in 60 general practices were screened using a simple mailed questionnaire with 4 domains: a functional, somatic, mental and social domain. For the older persons with problems on 3 or 4 domains the intervention general practitioners (GPs) made a care plan using a functional geriatric approach. Outcomes: competence to perform ADL independently, quality of life, satisfaction with delivered care, process measures, indicators for proactive, coherent care.

Findings
The questionnaire was sent to 11,407 persons. The response rate was 63.2% (n=7212, mean age 81, 61% female). Twenty-six per cent (n=1,898) of the respondents had problems on 3 or 4 domains. For 270 randomly chosen persons with complex problems in 30 GP practices a care plan was made. Some 600 participants with complex problems were followed in usual care.

Implications for policy and practice
Details of the screening procedure and outcomes of the ISCOPE strategy will be presented.

Jeanet Blom is a general practice researcher with a focus on care for older people in general practice and cardiovascular prevention for older people.
Continuity of care for patients with diabetes in Australian general practice and its impact on health service use  
Elizabeth Comino1, Duong Tran1, Mark Harris1  
1University of NSW

Aims and rationale  
Current diabetes management guidelines encourage an annual cycle of primary care. This is best achieved when there is good continuity and follow-up. This paper aims to describe continuity of care and receipt of team care arrangements (TCA) for a large cohort of older NSW residents.

Methods  
Medicare claim data of 257,757 participants in the 45 and Up Study in a 12 month period prior to recruitment were extracted. We explored continuity of care (80% or more claims from the one provider), claims for annual cycle of care (PIP) and TCA for participants with and without diabetes.

Findings  
There were 23,832 (9.2%) participants with diabetes, and 53.4% received care from the same GP. Overall, the mean number of GP attendances were 6.9 (lower quartile: 3; medium: 5; upper quartile: 9), most commonly for a standard consultation. Participants with diabetes visited GP more often than those without (9.9 versus 6.6 times); 20% and 23% had PIP and TCA claims. Initial analysis suggests that continuity of care was not associated with PIP or TCA claims.

Implications for policy and practice  
Understanding the circumstances for optimal use of health care services for treatment of diabetes and the factors that influence this is of interest to those who wish to improve policy and practice. While it is generally accepted that continuity of care is associated with receipt of desired processes of health care for management of diabetes these preliminary results were inconclusive and further exploration is these data will be presented.

NSAID use, cardiovascular and gastrointestinal risk in Australian general practice patients with arthritis  
Clare Bayram1, Graeme Miller1, Lisa Valent1, Henry Krum2, Daniel Stiel3, Nigel Stocks4, Julien de Jager5  
1Family Medicine Research Centre, University of Sydney, 2ACCREDITS Therapeutics, Monash University, 3University of Sydney, 4Discipline of General Practice, University of Adelaide, 5Gold Coast Hospital

Aims and rationale  
NSAID use is common in arthritis patients, but its use requires consideration of associated risks. This study aims to: quantify the cardiovascular and gastrointestinal risk profiles of patients with arthritis; and determine what proportion are using NSAIDs appropriately.

Methods  
A sub-study of the BEACH program (a continuous national study of general practice activity in Australia). Data were collected for 4,432 patients by 152 GPs, 25/10/11 – 16/1/12. Gastrointestinal risk and ‘appropriate NSAID use’ criteria were drawn from ‘NSAIDs and the gastrointestinal tract’, GESA guideline 2008. Cardiovascular risk was calculated using ‘Guidelines for the assessment of absolute cardiovascular disease risk’, National Vascular Disease Prevention Alliance, 2009.

Findings  
Preliminary analysis showed 32.2% of patients had at least one type of arthritis: 29.8% osteoarthritis, 1.2% rheumatoid arthritis and 2.2% other arthritis. Of 1,367 arthritis patients with medication data, 608 (44.5%) were on aspirin and/or NSAIDs. Cardiovascular risk was calculated for 1,067 patients: two-thirds (66.2%) had high risk, 6.3% moderate, and 27.6% low risk. Gastrointestinal risk was calculated for 1,308 patients: 40.9% had high risk, 49.4% moderate and 9.7% low risk. The risk profile was calculated for 985 arthritis patients: 45.9% had both high cardiovascular and high gastrointestinal risk. Of these patients, 20.3% were taking NSAIDs against guideline recommendations.

Implications for policy and practice  
One-third of patients at GP encounters have arthritis. Many of these have high cardiovascular and gastrointestinal risk. In this group, the use of NSAIDs would be expected to have a high incidence of adverse events.

A/Professor Elizabeth Comino is a leading community and primary health care researcher in Australia. She is interested in access to best practice primary health care and use of administrative data and record linkage to create comprehensive primary health care data collections.

Clare Bayram has been a member of the BEACH research team at the University of Sydney for the past ten years. She is a current PhD candidate investigating quality use of pathology in Australian general practice.
Remote and rural health 1

Perceptions of enablers and barriers to collaboration within a rural South Australian mental health network

Mikaila Crotty1, Julie Henderson1, Jeffrey Fuller1
1School of Nursing and Midwifery, Flinders University

Aims and rationale
Recruitment and retention of specialist mental health staff to rural and remote settings is known to be problematic, as is access to specialist mental health services. However, little is known about clinicians’ perceptions on what helps or hinders mental health networks, particularly between different types of services. This study evaluated perceptions from a variety of clinicians working within a mental health network.

Methods
Qualitative, semi-structured interviews were conducted with 10 representatives, including the mental health team, general practice, hospital, community health and non government organisations. Additionally, a social network analysis was conducted to identify existing links between services.

Findings
Interview data suggested that working relationships between local services could be perceived as stronger when a personal or historical element is recognisable. The social network analysis revealed the network to be dense and de-centralised, with no one agency standing out as highly central. This supports the interview findings that agency staff are well known to each other, and these relationships were reported as being primarily informal.

Implications for policy and practice
The informality of relationships between service providers was shown to be the main facilitator in the network. This promotes the communication between services and service providers essential for successful collaboration, yet also threatens the sustainability of the network based on the recruitment difficulties.

Access to sexual and reproductive health services for rural and regional young people in Queensland

Sarah Larkins1, Caroline Harvey2, Paula Matich1, Priscilla Page1, Clare Jukka1, Jane Hollins1
1School of Medicine and Dentistry, James Cook University,
2Family Planning Queensland

Aims and rationale
Young people in rural areas have difficulty accessing sexual and reproductive health (SRH) services. This project investigates how access to SRH services can be improved for young people in rural and regional Queensland through studying acceptability and accessibility of SRH services, and markers of quality in SRH service delivery as defined by young people and service providers.

Methods
Multiple case studies approach using mixed methods. Cases selected purposively and described using service mapping and usage data, electronic survey and focus group discussions with young people, and interviews with service providers. Elements of action research are used through working with young people and service providers to identify problems and develop solutions.

Findings
Data has been collected from four sites. 146 responses have been received for the survey to date and 5 focus groups held. 71% of respondents have been female and 11% of respondents to date have been Indigenous young people. Although the majority of respondents reported needing SRH care, large numbers did not seek professional help, rather relying heavily on friends, family and the internet; not always reliable sources of information and advice. Most important factors for young people when accessing SRH services were the presence of friendly and non-judgemental staff members.

Implications for policy and practice
This project provides important insights as to how, where and why young people in rural and regional Queensland access SRH services, and policy guidance about how best to allocate scarce human resources and services.

A/Professor Sarah Larkins is an academic general practitioner with research interests in Indigenous, rural and remote health services, sexual and reproductive health, health workforce and training and research capacity building. She is currently the Director of Research and Honours Coordinator at the James Cook University School of Medicine and Dentistry.
Formulating a more appropriate and equitable system for allocating rural and remote health workforce incentives

Matthew McGrail1, John Humphreys2
1Monash University, School of Rural Health and Gippsland Medical School, 2Monash University, School of Rural Health

Aims and rationale
Considerable resources are provided to the rural and remote health workforce to overcome recruitment and retention difficulties, with eligibility largely determined using existing geographical classifications. Given the shortcomings associated with using current classifications, this presentation outlines a more appropriate and equitable system based on medical workforce data.

Methods
Geo-coded data (N=3636 GPs) from the national Medicine in Australia: Balancing Employment and Life (MABEL) study were used to examine geographical variation in four key professional and two non-professional indicators known to be related to difficulties with recruitment and retention. Associations were measured between these six sentinel indicators and practice locations, geo-coded to both community remoteness (ASGC-RA) and population size.

Findings
An alternative classification, predominantly based on four homogeneous population size groups (0–5,000, 5,001–15,000, 15,001–50,000 and >50,000), greatly increased the measured association, with geographical location required only to discriminate ‘remote’ communities within the smallest population size group.

Implications for policy and practice
Current incentives are distributed inequitably because they are based on heterogeneous geographical categories. Our alternative scheme based predominantly on town size significantly increases sensitivity to small-area geographical differences relevant to workforce supply, resulting in a more appropriate and equitable basis for the allocation of recruitment and retention incentives. Formulating eligibility for rural health workforce incentives based on key workforce data indicators can also apply to allied health, nursing and other primary health care workers.

Dr Matthew McGrail is a Research Fellow, based at the Gippsland Medical School within the Monash University School of Rural Health. His main research interests include: rural health workforce, geographic classifications and rural policy, and measures of access and equity.

How effectively do aged care assessment processes translate into real needs-based care in remote Aboriginal communities of Central Australia?

Melissa Lindeman1, Di Bell1, John Reid1
1Flinders NT, Centre for Remote Health

Aged care assessments enable access to appropriate support services. Identified needs should be incorporated into a care plan which provides an overview of care requirements and how they are to be actioned. However, it is unknown to what extent typical mainstream assessment processes align with the perceived needs of older Aboriginal people and their carers. A lack of community based evidence on aged care preferences and the support needs of Aboriginal people living in remote settings questions the appropriateness and value of existing service models.

This paper reports findings from a study which investigated aged care assessment practices within the remote Aboriginal context of central Australia. Our study aimed to explore how ‘need’ is constructed by the assessors, to what extent it aligns with the perspectives of Aboriginal people, and how these constructions of need are translated within remote community contexts. This qualitative study has involved a series of in-depth interviews with personnel responsible for the needs assessment of older Aboriginal people, focus groups with service users in remote Aboriginal communities, and data analysis incorporating cross-case and thematic approaches.

We report on the mismatch between aged care assessors’ identification of the needs of individuals living in remote environments, the perspectives of Aboriginal people themselves, and aged care funding program requirements. Poor equity and access to aged care services in this environment is a consequence of culturally dissonant assessment processes, inadequate recognition of the realistic costs of appropriate care planning and the challenging context of remote service delivery which includes lack of appropriate care staff and poor community infrastructure.

Dr Melissa Lindeman has a background in social welfare, policy and service development, research and education. Several of her current projects focus on remote and Indigenous aged and dementia care. She is inaugural President of the Australian Association of Gerontology NT Division.
5 Nursing in primary health care 1

Enablers to participation in advanced training and roles for primary care nurses: ADVANCE project

Christine Hallinan1, Annette Knopf1, Kay Cruse1, Sandy Wellwood1, Kelsey Hegarty2
1Northern Division of General Practice, 2The University of Melbourne

Aims and rationale

Strategies to extend practice nurse roles have included funding of general practice networks to provide informal support, funding to promote continuous professional development and an increased access to grants and scholarships. To date there is limited evaluatory data on participation barriers and course outcomes for nurses who have accessed post registration courses. The aim of this project is to evaluate barriers, enablers and outcomes for nurses undertaking post-graduate university courses in primary-care nursing.

Methods

Mixed method design with questionnaire based, self-administered survey of 272 postgraduate students from The University of Melbourne. Quantitative data will include demographic and preferential data. Qualitative data from open ended questions will inform themes. A DVD resource will be produced to provide 'a snap-shot' of how nurses overcome barriers to advanced general practice roles. Nurses who choose to highlight their achievements will have the opportunity to be in the DVD.

Findings

The research findings will provide evidence on how training may support and promote advanced nurse roles to inform policy-makers, funders and professional body dialogue.

Implications for policy and practice

Project outcomes will assist practice nursing and promote the use of the nurse in a more advanced role. It is anticipated project will provide evidence for capacity-building strategies; increase sustainability of primary health care system and address GP workforce shortages. It is expected the DVD will be a resource to highlight general practice nurses working successfully in ADVANCE roles.

Lessons from the QUIT in general practice study

Elizabeth Halcomb1, Nicholas Zwar2, John Furler3, Robyn Richmond4, Julie Smith3, Oshana Hermitz4, Irene Blackberry3
1School of Nursing and Midwifery, University of Western Sydney, 2School of Public Health and Community Medicine, University of New South Wales, 3Department of General Practice, University of Melbourne, 4Australian Centre for Economic Research on Health, The Australian National University, 5Research Centre for Primary Health Care and Equity, University of New South Wales

Aims and rationale

Tobacco smoking remains one of the commonest preventable causes of death in the world. Smoking cessation is one of the most cost effective public health strategies. In 2008, the NHMRC funded a randomised controlled trial of practice nurse-led smoking cessation in general practice. To evaluate the feasibility and acceptability of the practice nurse-led intervention arm a process evaluation was conducted.

Methods

Telephone interviews were undertaken with a purposive sample of practice nurses (n=22), general practitioners (n=15) and consumers (n=17). Potential participants were stratified based on number of patient visits. Individuals were then recruited from each strata until data saturation was achieved. Interviews were transcribed verbatim and imported into NVivo 2.0 before being analysed using a process of thematic analysis.

Findings

Findings of this study reveal the different perceptions of practice nurses, general practitioner and consumers regarding participation in this trial and acceptability of the intervention. Interview data reveal the barriers and facilitators to the implementation of the practice nurse led smoking cessation intervention as well as providing an insight into the issues around sustainability of the intervention.

Implications for policy and practice

A growing number of research projects are seeking to implement and evaluate practice nurse led interventions. The outcomes of these trials are vital to developing the evidence base for practice nursing. These studies will assist researchers, practitioners and policy makers to improve the feasibility and acceptability of interventions developed in the future.

Christine Hallinan is a public health researcher, with a research objective to provide complex evaluations relating to the provision of care in general practice. The research involves an exploration of general practice context on decision making, and incorporates an examination of the organisational, structural and political milieux of general practice.

A/Professor Liz Halcomb works in the School of Nursing and Midwifery at the University of Western Sydney. Her research interests relate to general practice nursing, nursing workforce and chronic disease, mixed methods research and evidence based practice.
How willing are Australian practice nurses to take a greater role in chlamydia testing and management?

Rebecca Lorch\(^1\), Alaina Vaisey\(^2\), Jane Hocking\(^2\), Anna Wood\(^2\), Simone Spark\(^2\), Meredith Temple-Smith\(^3\), Rebecca Guy\(^1\)

\(^1\)The Kirby Institute for Infection and Immunity in Society, University of NSW, \(^2\)Centre for Women’s Health, Gender and Society, University of Melbourne, \(^3\)Department of General Practice, University of Melbourne

**Aims and rationale**

In Australia, chlamydia is the most common notifiable infection, occurring predominantly in those aged 16–29 years. Testing is important to detect infections as most are asymptomatic, yet testing rates are low in general practice.

**Aims:** To determine practice nurses’ (PNs) chlamydia knowledge, awareness and practices, and their willingness to take a greater role in chlamydia testing and management

**Methods**

A paper-based survey was completed by 60 PNs, in 41 clinics participating in a trial of chlamydia screening across four states. The survey, conducted prior to trial commencement, included chlamydia knowledge and management questions.

**Findings**

Most PNs correctly identified chlamydia as being mainly asymptomatic in women (84%) and men (75%). Only 13% identified 25–29 year old men as having high chlamydia rates. A high proportion of PNs reported they would offer testing to young women presenting for a pap smear (84%), with low abdominal pain (98%), and when pregnant (89%), a lower proportion to young men with a sore throat (74%) or having an employment medical examination (63%).

Most PNs (97%) correctly reported a repeat test should be conducted after chlamydia treatment, yet 52% incorrectly reported it should occur within 6 weeks of treatment. The majority (86%) of the PNs wanted a greater involvement in chlamydia testing and additional training.

**Implications for policy and practice**

We identified some knowledge gaps about chlamydia, highlighting the importance of education and support for PNs. Most PNs were willing to have a greater role in chlamydia testing and management.

---

Rebecca Lorch, an experienced sexual health nurse, has been working with the Australian Chlamydia Control Effectiveness Pilot trial for the past 15 months. She has commenced a Masters degree looking at whether an intervention directed at practice nurses can help to increase chlamydia testing rates.

Changes in the structure and nature of primary health care work: the case of nurse practitioners

Brenton Prosser\(^1\), Rachel Davey\(^1\), Shannon Clark\(^1\)

\(^1\)University of Canberra

**Aims and rationale**

Two key characteristics of post-industrialism in western societies are the rise in service work and the emphasis on worker knowledge as a commodity. In relation to service professions dedicated to care, there has been an associated shift away from mass service provision in public institutions using Fordist rationales and toward an emphasis on individualised services and consumer choice. These changes are altering the structure and nature of primary health care work and this paper aims to argue that the growth in advance practice nursing roles is one embodiment of these trends.

**Methods**

Specifically, the paper uses the emerging role of nurse practitioner as a lens through which to consider these post-industrial changes, before reporting on related research into the impact of such change on other human service professions. The paper will then use these research findings to explore potential common challenges for nurse practitioners and other primary health care workers.

**Findings**

In doing so, the paper argues that the developing new role and work arrangements for nurse practitioners points to a need to reconsider the structure and nature of primary health care work in Australia.

**Implications for policy and practice**

The Australian Commonwealth Government has set the growth in numbers of nurse practitioners as a health policy priority. As a result, the conditions for recruitment and retention of nurse practitioners have become important areas for investigation, as has the viability and sustainability of nurse practitioner work arrangements in contemporary contexts.

**Brenton Prosser, PhD, is a senior research fellow at the Centre for Research and Action in Public Health. He is an adjunct in the School of Sociology at the Australian National University and the School of Education at the University of South Australia.**
6 Women’s and men’s health 1

Contraceptive management in Australian general practice: an analysis of BEACH data

Danielle Mazza1, Christopher Harrison2, Angela Taft3, Bianca Brijnath1, Helena Britt2, Melissa Hobbs3, Kay Stewart1, Safeera Hussainy1
1Monash University, 2University of Sydney, 3La Trobe University

Aims and rationale
To determine current trends in contraceptive practice by general practitioners (GPs) in Australia.

Methods
Analysis of data from a random sample of 3,910 Australian GPs who participated in the Bettering the Evaluation and Care of Health (BEACH) survey, a continuous cross-sectional survey of general practice activity, between March 2007 and April 2011. Consultations with female patients aged 12–54 involving all forms of contraception were analysed.

Findings
Age, ethnicity and holding a Commonwealth Health Care Card were significant influences on rates of contraceptive encounters. Sociodemographic variables such as location and Indigenous status were not shown to have any effect on contraceptive management. Consultations concerned with emergency contraception remains low in the general practice setting but there were high rates of counselling, advice or education involved in such encounters (48%) compared to general contraceptive encounters where less than a fifth of encounters involved counselling, advice or education. There was moderate use of long acting reversible contraceptive methods especially among women 34–54 years old and continued high use of the combined oral contraceptive pill.

Implications for policy and practice
A shift towards recommended long-acting reversible contraceptive practice has yet to occur in general practice in Australia. Further research is required to understand patient and GP perspectives on contraceptive choices and the barriers and enablers to more effective contraceptive use.

Men’s health: improving skills and raising awareness in the primary health care nurse sector

Wendy Thomas1, Carol Holden2, Taletha Rizio1
1Andrology Australia

Aims and rationale
In response to the National Male Health Policy and the need to develop workforce capacity in men’s health, a primary health care nurse (PHCN) men’s health Train-the-Trainer (TTT) program was developed. It aims to raise awareness, improve knowledge and equip PHCNs with the skills to better engage men in community and primary health care settings. A pilot program evaluation aimed to identify strategic issues to inform nationwide implementation.

Methods
The pilot program included an eight hour, APNA-endorsed workshop to train PHCNs as facilitators to deliver the men’s health education to their peers. The evaluation involved semi-structured interviews with participants and/or written survey responses.

Findings
Eighteen participants (mostly PHCNs), representing 11 GP Divisions/Networks from regional and metropolitan areas in five states attended. The majority of participants (94% ‘strongly agree’ or ‘agree’) felt confident to facilitate a workshop for their peers, with ten (of 11 Divisions represented) planning to run a workshop. Facilitators also reported confidence in identifying the major health issues affecting men. Most participants (94% ‘strongly agree’ or ‘agree’) had a greater appreciation of men’s help-seeking behaviours and awareness of available men’s health resources. Initial feedback from facilitators planning events suggests insufficient funds to support the training and insufficient time to run the full program are barriers. Enablers included the program’s capacity to accommodate local needs and experts.

Implications for policy and practice
Initial evaluation suggests that the PHCN men’s health TTT is an effective model to build workforce capacity in men’s health.

Professor Danielle Mazza is an academic GP and author of the textbook ‘Women’s health in general practice’. Current research involves closing evidence practice gaps in preventive care, women’s sexual and reproductive health, cancer screening and guideline development and implementation.

Carol Holden (PhD MPH) is CEO of Andrology Australia and oversees health promotion and education programs in men’s reproductive and general health for health professionals and the general public. Her research interests include improving primary health services for men.
Psychological perspectives of urinary incontinence: a metasynthesis

Jodie Avery1, Annette Braunack-Mayer1, Nigel Stocks1
1University of Adelaide

Aims and rationale
Associations between urinary incontinence, mental health and quality of life and have been demonstrated, but further exploration into the implications of this connection is necessary. Few investigations have focused on whether psychological issues precede incontinence or vice versa. As part of a suite of mixed method studies looking at urinary incontinence and depression in the South Australian population, a qualitative metasynthesis has been undertaken.

Methods
In order to develop interview questions, a metasynthesis of the available literature in this area was undertaken. Using Noblit and Hare’s approach, studies were selected within the scope of the topic. A determination of how studies were related was undertaken, and themes were identified. Then the studies were translated into one another, and synthesised to see whether the results were comparable, in opposition or whether they represented a line of agreement.

Findings
A number of themes recurring throughout the qualitative literature with regard to incontinence and mental health were identified, including the physical, psychological and social consequences of incontinence. These themes provide a broader perspective about the issues involved in the experiences of those with urinary incontinence and mental health, than may be achieved by those already found in quantitative analysis of the issues.

Implications for policy and practice
The key distinction between an empirical amalgamation of studies and a qualitative synthesis is that the qualitative examination yields results that are interpretive, rather than the aggregative findings from quantitative studies. Psychological factors mediate a number of issues such as help seeking for urinary incontinence.

Jodie Avery BA, BAppSc, MPH is a Senior Research Associate/Epidemiologist with Population Research and Outcome Studies, University of Adelaide; has worked in public health since 1997 and is currently undertaking a PhD in medicine exploring ‘Mental health and its influence on help seeking behaviour for incontinence’.

Male health in the medical curriculum: leading to male-friendly primary health services

Carol Holden1, Veronica Collins1, Ben Canny2, Robert McLachlan3,1
1Andrology Australia, Monash University, 2Faculty of Medicine, Nursing and Health Sciences, Monash University, 3Prince Henry’s Institute

Aims and rationale
In response to poorer health status and lower use of health-care services by men compared to women, the Australian National Male Health Policy (2010) includes commitments to improve primary care access for males, partly through better training of the workforce. A male health module for medical students has been developed to address the lack of coordinated male health training for doctors.

Methods
Andrology Australia, five medical schools, and the Australian Medical Students Association, have developed a curriculum framework in male health including 10 topics. A needs analysis survey of final-year medical students assessed preparedness for managing male health issues. Questionnaires included health topics from general to reproductive health, with 4-item Likert-scale responses (‘no coverage’ to ‘in-depth coverage’ in the medical course; ‘not prepared’ to ‘thoroughly prepared’ for clinical issues). The framework will be piloted with course coordinators and lecturers.

Findings
The student survey (n=170; 74% response) showed students felt well prepared in some areas of men’s health—94% felt moderately/thoroughly prepared to do CVD risk assessment on men. However, 68% felt not/minimally prepared to do scrotal examinations and 62% reported erectile dysfunction had no/brief coverage in the curriculum despite its associations with cardiovascular disease. Student need mostly related to aspects of male reproductive health, topics covered by the framework.

Implications for policy and practice
The medical curriculum module will help doctors entering primary health care to be better prepared for managing male patients and to create male-friendly services, ultimately improving health outcomes for Australian males.

Carol Holden (PhD MPH) is CEO of Andrology Australia and oversees health promotion and education programs in men’s reproductive and general health for health professionals and the general public. Her research interests include improving primary health services for men.
7 Health systems and services

Transforming care for people with complex care needs via boundary spanning approaches

Lucio Naccarella1, Louise Freijser2, Kirsty Carter2
1The Australian Health Workforce Institute, The University of Melbourne, 2Victorian North and West Metropolitan Region Department of Human Services

Aims and rationale
To address the complex and multi-faceted needs of people, integrative workforce roles – ‘boundary spanners’ have emerged. Limited evidence exists about the core roles, skills sets, competencies and authorising environments that front-line staff in the Victorian Department of Human Service (DHS) require to effectively span the service and organisational boundaries to provide whole person-centred care for DHS clients with complex care needs.

Methods
A literature search was conducted of MEDLINE (ISI), CINAHL Plus (EBSCO), Health Business Elite, Informit Health and Social Sciences Collection, Humanities and Social Science Citation Index, and SocINDEX. Sixteen semi-structured interviews were undertaken with DHS staff and a group discussion with ten DHS clients to inform the literature review.

Findings
2,435 articles were identified, of which 33 were reviewed. Core boundary spanner roles included: networker, broker, relationship builder, communicator, assessor and care planner. Core skills sets included: communication; brokering, networking, negotiating, and coordinating. Core competencies included: experience and knowledge of the system, formal education, inter-disciplinary literacy; flexibility, adaptability and teamwork. The authorising environment requirements included: unified planning frameworks, clear accountability arrangements, collaborative governance, and an organisational culture of joint problem solving. A list of core competencies, skill sets, personal attributes and authorising environments was developed.

Implications for policy and practice
The literature review provided the opportunity to build working relationships between policymakers and researchers, and to create a platform for an Australian Research Council Linkage grant designed to generate evidence to support the Victorian DHS workforce (boundary spanners) of the future. Implications of the literature review are discussed, as are policy issues, practices and research gaps.

Dr Lucio Naccarella is a leading primary health care services researcher and evaluator, with interests in systems change, multidisciplinary primary health care team work, primary care organisations and primary medical care workforce reforms, from a policy, research and practice perspective.

Description of emerging integrated primary health care services in Australia

Julie McDonald1, Jacqueline Schroeder1, Gawaine Powell Davies1
1Centre for Primary Health Care and Equity UNSW

Aims and rationale
Integrated primary health care services (IPHCS) are developing in relative isolation from one another and little is known about the types of models being developed. We therefore conducted case studies of IPHCS being funded through three initiatives: GP Super Clinics (GPSC), HealthOne NSW and GP Plus Health Centres SA, including their demographics, service structure, governance, range of services and staffing, integration, coordination and access mechanisms.

Methods
Cross-sectional qualitative design involving semi-structured interviews with key informants from a purposive sample of 11 services.

Findings
Services differed in their ownership, settings, and type of service structures. GPSC tended to focus on improving coordination between general practice and private sector allied health professionals, while state health initiatives had a stronger focus on involving community health services. Opportunities for staff and community input into decision making and strategies for improving access and coordination of care reflected the particular circumstances and stage of development as much as the scheme under which they were funded. We identified three main locational configurations that related to configurations of these characteristics.

Implications for policy and practice
Although relevant policies set directions and determine some limits, these new services also reflect the individual history, local opportunities and their stages of development. While these services show early signs of tapping professional enthusiasm and overcoming some of the traditional sector, organisational and professional boundaries, it will be some time before this can be assessed with confidence.

Julie McDonald is a Research Fellow with the Centre for Primary Health Care and Equity and a PhD candidate at the UNSW. This paper is based on her PhD research, which was supported by a NHMRC scholarship.
**Dynamic team, harmonious flow: the management of patient demand at a busy community health centre in Melbourne**

Rowena Ryan¹, David Fong¹, Janina De Silva¹
Doutta Galla Community Health Service

**Aims and rationale**
A discussion of our system of managing patient demand using a triage system with trained reception, nursing review with a team of nurses comprising a refugee health nurse, two mental health nurses, two immunisation nurses, dedicated breast/pap smear, STI and counselling nurse, a clinic nurse and chronic disease nurse, and appropriate medical referral with follow up support in terms of referral and appointment planning. This model works well in terms of increases patient access without compromise to clients centred care, reduces staff stress and enables increased patient satisfaction.

Emphasis on streamlining appropriate referrals to GPs and nurses with the necessary time allocated, cross referral and shared client load based on the specialist skills of each team member—GP and nurse.

Encourages team based preventative care—able to manage ‘walk ins’ new clients, emergency presentations mixed in with proactive preventative care.

Our system is fully supported by trained and selected skilled receptionists and supportive management.

**Methods**
We describe our system as above, the training of staff required and the procedures used to ensure smooth patient turnover and trouble-shooting.

**Findings**
Increased appointments, staff and patient satisfaction.

**Implications for policy and practice**
Increased nursing support and good management improves general practice staff satisfaction and patient care and outcomes. This also has contributed to potentially achieving a sustainable model.

---

**Primary health care utilisation among ex-prisoners in two Australian states**

Diane Arnold-Reed¹, Stuart Kinner², Maelenn Gouillou², David Preen¹
¹School of Population Health, University of Western Australia, ²Burnet Institute, Australia

**Aims and rationale**
Ex-prisoners experience high rates of morbidity and mortality, driven largely by preventable conditions and health risk behaviours. Interventions to improve outcomes in this population typically aim to increase health care utilisation. The study aim was to identify the incidence and predictors of primary health care utilisation in a large sample of Australian ex-prisoners.

**Methods**
In Queensland, interviews with 809 prisoners within 6 weeks pre-release and 1 month post-release, have been completed. Baseline interviews with 1000 prisoners in WA are about to commence with follow-up linkage through Department of Health, Medicare and PBS records.

**Findings**
Among participants in Qld 48% reported seeing a GP within 1 month of release and the majority of these (71%) saw their usual GP; 24% reported seeing a GP more than once (range 2–12). Females (58%) more than males (45%) reported seeing a GP (Chi²=9.97; p=0.002). The proportions of Indigenous (40%) and non-Indigenous participants (49%) accessing a GP were marginally different (Chi²=3.81; p=0.051). Five per cent of participants reported hospitalisation.

**Implications for policy and practice**
In the month after release from prison almost one in two ex-prisoners in Queensland contacted a GP. Primary health care providers, if appropriately resourced, have the potential to meaningfully improve health outcomes for this profoundly marginalised group. Using record linkage, phase 2 of the study will provide a detailed description of primary, secondary and tertiary health care utilisation among a comparable cohort in WA. Together, the findings of this study will inform improvements to transitional health care for prisoners and ex-prisoners throughout Australia.

---

Dr Rowena Ryan is an experienced community health GP, currently undertaking a masters of medicine, with a particular interest in the history of community health centres—philosophy and practice—in Victoria.

Dr Diane Arnold-Reed is a Research Assistant Professor at the Centre of Health Services Research, School for Population Health, University of WA and Research Development Coordinator (General Practice), School of Medicine, University of Notre Dame (Fremantle).
8 Preventive health 1

What predicts patient referrals to a vascular disease prevention lifestyle program?

Megan Passey1, Rachel Laws2, Upali Jayasinghe3, Mahnaz Fanaian4, Suzanne McKenzie5, Gawaine Powell Davies1, David Lyle1, Mark Harris1

1University Centre for Rural Health-North Coast, University of Sydney, 2Prevention Research Collaboration, University of Sydney, 3Centre for Primary Health Care and Equity, University of New South Wales, 4School of Medicine and Dentistry, James Cook University, 5Broken Hill University Department of Rural Health, University of Sydney

Aims and rationale
Cardiovascular disease accounts for a large burden of disease, but is amenable to prevention through lifestyle modification. This paper examines patient and practice predictors of referral to a lifestyle modification program (LMP) offered through a cluster randomised controlled trial (RCT) of prevention of vascular disease in primary care.

Methods
We analysed data from the intervention arm of a RCT which recruited 36 practices through two rural and three urban GP Divisions. Each practice invited 160 eligible high risk patients. Practices were randomly allocated to intervention or control groups. Intervention practice staff were trained in screening, motivational interviewing, counselling and referral of high risk patients to a LMP involving individual and group sessions. Data include patient surveys; clinical audit; practice survey on capacity for preventive care; and referral records. Predictors of referral were examined using multi-level logistic regression modelling after adjustment for confounding factors.

Findings
Of 301 eligible intervention patients, 190 (63.1%) were referred to the LMP. Independent predictors of referral were baseline BMI ≥ 25 (OR 2.87 95%CI: 1.10, 7.47), physical inactivity (OR 2.90 95%CI: 1.36, 6.14), contemplation/preparation/action stage of change for physical activity (OR 2.75 95%CI: 1.07, 7.03), rural location (OR 12.50 95%CI: 1.43, 109.7) and smaller practice size (1–3 GPs) (OR 16.05 95%CI: 2.74, 94.24).

Implications for policy and practice
Providing a well-structured evidence-based lifestyle intervention, free of charge to patients, with coordination and support for referral processes can result in high rates of appropriate referrals for disease prevention. Referrals were more frequent from rural and smaller practices suggesting that these practices may be more ready to engage with these programs.

---

Multidisciplinary primary care intervention for crying babies improves maternal mood and decreases infant crying: a pilot study

Pamela Douglas1,2

1The Discipline of General Practice, The University of Queensland, 2Director, Possums The Clinic for Mothers and Babies

Aims and rationale
Cry-fuss behaviour in the first months of life is an indicator of risk postbirth. But parents complain of difficulty accessing help, and of receiving conflicting advice. Those with an unsettled baby have increased use of multiple health providers, including Emergency Departments. Key informants advocate improved health professional education, early intervention, and improved cross-professional communication to improve outcomes. Following the completion of systematic reviews across heterogenous literature, and their publication in key international journals, a clinical program is being delivered in a super clinic setting. Consistent with the recommendations of the 2009 Report on the Maternity Services Review, this preliminary evaluation offers insight into an innovative and multi-disciplinary postbirth program delivered in the primary care setting.

Methods
Prior to the initial consultation, consenting mothers completed a questionnaire comprising the Crying Pattern Questionnaire (a validated tool that includes assessment of feeding methods), a Likert sleep problem scale, quantification of previous visits to health care providers, and the Edinburgh Postnatal Depression Scale. Three weeks after the initial consultation, a total of 14 mothers were followed up by phone questionnaire.

Findings
Preliminary analysis suggests that mothers rated sleep to be less of a problem, crying and fussing had decreased, and scores had improved on the Edinburgh Postnatal Depression Scale. Feeding methods largely remained unchanged.

Implications for policy and practice
Preliminary analysis suggests that a multi-disciplinary intervention for infant cry-fuss problems delivered in the primary care setting is effective.

---

Dr Pamela Douglas is an adjunct Senior Lecturer with the Discipline of General Practice, The University of Queensland, and Director of Possums, The Clinic for Mothers and Babies, UQ Health Care Annerley. Her research has been supported by two PHCRED Fellowships and a Chris Silagy Scholarship (RACGP).

---

Dr Megan Passey leads a research program on chronic disease prevention and management of relevance to rural and remote communities. She is based in Lismore.
Impact of subsidised fruit and vegetables on the health and nutrition of Aboriginal children

Andrew Black1,2, Hassan Vally1, Fiona Smith1, Ray Jones1, Kerry Hampshire2, Peter Morris4, Kerin O'Dea5
1Bulgarr Ngaru Medical Aboriginal Corporation, 2Division of Health Sciences, University of South Australia, 3School of Public Health and Human Biosciences, Latrobe University, 4Menzies School of Health Research, Charles Darwin University, 5Sansom Institute, Division of Health Sciences, UniSA

Aim and rationale
Social disadvantage correlates with poorer health outcomes, higher rates of chronic disease and lower adherence to nutrition guidelines. This is reflected in the life expectancy gap between Aboriginal and Torres Strait Islander people and non-Indigenous Australians. In this context effective interventions to improve nutrition are important to guide policy development. The aim of this study was to evaluate the nutritional and health outcomes for Aboriginal children of a fruit and vegetable subsidy program.

Methods
An evaluation was undertaken of a subsidised fruit and vegetable program for disadvantaged Aboriginal families at three rural Aboriginal Health Services. The impact assessment involved a ‘before and after’ comparison using 24 hour dietary recalls and biomarkers. Health outcomes were assessed with retrospective clinical record audits. Focus groups and key informant interviews were used to document the implementation and sustainability of the program.

Findings
57 families were recruited. Baseline assessment of 149 children showed low fruit and vegetable consumption. Twelve month follow-up of 129 children showed significant increases in biomarkers of plant food intake: β-cryptoxanthin, vitamin C, lutein-zeaxanthin and folate. This was associated with significant decreases in GP/hospital visits for illness: Before 4.2 visits/year, After 3.6 visits/year (95% CI for change −0.001 to −1.2) and oral antibiotics: Before 1.6 prescriptions/year After 1.1 prescriptions/year (95% CI for change −0.85 to −0.24). The importance and challenges of Aboriginal community involvement in evaluation research are presented from a local perspective.

Implications for policy and practice
This evaluation shows the potential of fruit and vegetable subsidies to improve the health and nutrition of disadvantaged Aboriginal children. The challenge is how food subsidies could be integrated to enhance local nutrition initiatives.

Understanding the mechanisms of coordination of primary health care that support people with intellectual disability in rural areas

Lucie Walters1, Heather Burton1, Linda Sweet1, Jane Tracy7, Rachel McDonald2, Bob Davis2
1Flinders University Rural Clinical School, 2Centre for Developmental Disability Health, Monash University

Aims and rationale
People with intellectual disability (ID) are a neglected community with high rates of mortality and chronic disease. The inherent difficulties in providing care for people with an intellectual disability are well understood but little traction has been made in overcoming them. Effective primary health care coordination may make a significant difference to the long term health and wellbeing of this group. This study seeks to define the underlying mechanisms of coordination of care programs which are transferable to the context of people with ID living in rural areas.

Methods
This paper presents the preliminary steps in a mixed methods implementation research project using Pawson and Tilley’s Realist Evaluation Theory which examines how mechanisms in particular contexts generate outcomes. People with ID in Arrarat (Victoria), Millicent and the Riverland in South Australia were surveyed regarding their health status and experience of health care. Semi-structured interviews with people with ID and their carers, and focus groups of health and disability professionals were performed.

Findings
This study commenced in March 2012 and the paper will outline the background to this research, and the initial outcomes of coordination of care mechanisms in the context of this population group.

Implications for policy and practice
Local, state and Commonwealth Government health policies have significant implications to the success or otherwise of coordination of care programs for people with ID in rural areas.

A/Professor Lucie Walters is a rural GP who leads the internationally recognised community-based medical education program where students are based in rural general practice for a full year. She is a SA Clinical Senator and the Chair of ACRRM Research Committee. She seeks to improve rural health outcomes.

Dr Andrew Black is a GP/public health physician who works at Bulgarr Ngaru Medical Aboriginal Corporation and a PhD at UniSA. He has a research focus on nutrition in health promotion and has previously worked for the Aboriginal Medical Services in the ACT, NT and NSW.
Consumer perspectives

Practitioner factors in enablement: an investigation of patients’ perceptions of the nurse practitioner role in primary health care

Jane Frost1, Mary Cruickshank1, Carmel McQuellin1
1University of Canberra

Aims and rationale
This study will investigate patients’ perspectives of the nurse practitioner role through the use of enablement theory. Quality in health care interactions is difficult to demonstrate and previous studies in relation to nurse practitioners have predominantly focused on health outcomes and patient satisfaction. Enablement theory will be used to examine patients’ self-efficacy.

Patients’ ability to cope with their health needs following a consultation is a key factor in enablement, and effective health care. Whilst international research into primary health care has been examined with the use of enablement as a quality indicator, few studies have been conducted in Australia and even less have examined nurse practitioner care. This research will begin to address this gap in the literature and prompt further investigation into both enablement as a concept and its relationship to nurse practitioner care.

Methods
A sequential mixed method approach has been applied to investigate patient enablement scores following a consultation with a nurse practitioner in a primary health care setting.

Findings
This is an ongoing study and preliminary findings will be discussed in the presentation.

Implications for policy and practice
Enablement theory has significant implications in qualifying the potential benefits of nurse practitioner care in relation to patient self-efficacy.

Catching chlamydia': increased access to chlamydia screening via community pharmacies; the views of young people

Allison Bell2, Rhian Parker1, Frank Bowden2,4, Gabrielle Cooper3, Marian Currie2, Louise Deeks2,3, Sarah Martin2,4, Rendry Del Rosario1, Jane Hocking5
1Australian Primary Health Care Research Institute, 2Academic Unit of Internal Medicine, Australian National University, 3Discipline of Pharmacy, Faculty of Health, University of Canberra, 4Canberra Sexual Health Centre, The Canberra Hospital, 5Centre for Women’s Health, Gender and Society, University of Melbourne

Aims and rationale
In 2011, those aged between 16 and 30 years comprised 81% of the diagnosed cases of chlamydia notified in Australia. The aim of this study was to understand the perspective of young people when providing chlamydia screening in pharmacies with an incentive.

Methods
Specially trained pharmacy staff at 4 city and 2 suburban pharmacies in the Australian Capital Territory offered or, on request, provided a chlamydia test kit to those aged 16 to 30 years attending the pharmacy. A $10 incentive was paid to participants who submitted a urine test and written questionnaire. Of the 945 participants, 18 consented to semi-structured telephone interviews to further explore their perceptions of this form of chlamydia testing.

Findings
979 chlamydia testing kits were distributed, 970 (99.1%) sample pots returned and 945 participants completed anonymous questionnaires in the 15 day study. Data from the questionnaires indicated that young people found chlamydia testing in pharmacies acceptable. The subsequent 18 in-depth telephone interviews showed 83% felt comfortable discussing chlamydia in a pharmacy and 33% agreed to be tested due to the cash incentive.

Implications for policy and practice
Chlamydia testing in community pharmacies with remuneration for young people is effective, accessible and may provide another option for opportunistic testing as part of a national chlamydia screening scheme.

Allison Bell is a registered nurse, who has completed a Graduate Diploma in Critical Care Nursing, University of Canberra. She is currently employed at APHCRRI as a research assistant.
Factors that affect adherence to nebulised medications in patients with cystic fibrosis

Parisa Aslani1, Alice Hogan1, Jo-anne Brien1,2, Rita Karamy1, Mary-Ann Bonney3
1Faculty of Pharmacy A15, The University of Sydney, Sydney, NSW 2006, Australia, 2Therapeutics Centre, St Vincent’s Hospital, Darlinghurst, NSW 2010

Aims and rationale
To explore experiences of patients with cystic fibrosis (CF) when taking nebulised medicines, identify factors that impact adherence and strategies used by patients to adhere to therapy.

Methods
Ten participants with CF were recruited through CF NSW by advertising using electronic methods and a mail-out. In-depth semi-structured face-to-face interviews were conducted with adult patients. After five interviews no new themes emerged and five further interviews were conducted to ensure saturation in themes. The interview protocol covered factors impacting adherence/non-adherence, experiences with nebulised medicines and strategies to help adherence. Interviews were audio-recorded, transcribed verbatim and content analysed for anticipated and emergent themes.

Findings
Half of participants were male; age ranging from 22 to 45 yrs. Five broad themes (with more specific sub-themes) were identified: Feelings about taking nebulised medicines (necessary/important, dislike, part of life); Experiences with taking nebulised medicines (cleaning, time of use, flexibility, balance in routine); Factors leading to non-adherence (time consuming therapy, side effects/effects of medicine, work/social demands, lack of perceived importance); Factors facilitating adherence (perceived medicine importance, habit/routine, support, health benefits); Strategies for adherence (technology/medicine dose form, timetabling).

Implications for policy and practice
Nebulised therapy takes up a substantial amount of time however patients try to alter their routine to incorporate nebulising into their daily lives. Several factors impacting adherence and strategies used to enhance adherence were cited. These factors should be examined more closely to assist in the development of future educational tools for adult patients with CF to improve nebulised delivery and adherence to nebulised medicines.

Exploring the experiences of smoking and smoking cessation in primary care patients with depression

Nicole Clancy1, Nicholas Zwar1, Robyn Richmond1
1School of Public Health and Community Medicine, University of NSW

Aims and rationale
Both smoking and depression contribute heavily to the burden of disease amongst general practice (GP) patients. As overall rates of smoking in Australia decrease, the proportion of continuing smokers who have mental illness is increasing. The aims of this study were to explore the experiences of smokers with depression and to gain an understanding of what further help they would have liked during their quit attempts, including help from their GP.

Methods
16 patients participated in in-depth semi-structured interviews conducted over the telephone. The interviews were then transcribed and analysed using a phenomenological qualitative approach.

Findings
All patients expressed a desire to quit but motivation levels varied. Major themes that emerged were: 1) attitudes towards smoking ranged from enjoyment to a strong dislike; 2) mediators of smoking include mood disturbances, a sense of hopelessness, poor control over one’s life and a lack of meaningful activities; 3) a feeling that more help is needed to successfully quit, including enhanced internal factors and increased external supports.

Implications for policy and practice
These depressed smokers were interested in quitting within a GP setting. They may benefit from additional psychological support. In a GP environment this could be aided by collaboration with computer-based modules, practice nurses or telephone support. Acceptability of a primary care approach is important as psychiatrists and psychologists with skills in smoking cessation are uncommon and tobacco addiction is currently excluded as a reason for psychologist referral under a GP Mental Health Plan.

A/Professor Parisa Aslani is an associate professor in Pharmacy Practice working in the field of consumer medicine information and adherence for the past 16 years. Parisa and her colleagues have received >$2.6 million in research funds and authored >50 peer-reviewed journal articles.

Dr Nicole Clancy is an academic GP registrar at the University of NSW. She has been involved in research into smoking and depression using both qualitative and quantitative techniques. She has also been involved in student teaching at the university.
10 Education and training

Education and audit feedback: a randomised controlled trial to increase general practitioner documentation of dementia diagnosis

Fiona Millard¹, Lee Kennedy², Bernhard Baune³
¹Department of Psychiatry, SOM, James Cook University, ²School of Medicine, Deakin University, Barwon Health, ³Head of Psychiatry, University of Adelaide

Aims and rationale
Many people living in the community with dementia are not diagnosed until the family shares their concerns with a doctor. Diagnosis is the key to appropriate support and management for both the patient and their carers. This project aimed to improve documentation of dementia diagnosis in general practitioner electronic medical records, a prompt for general practitioners to engage these patients with dementia services.

Methods
A cluster randomised controlled trial was designed with 56 general practitioners (GPs) from 47 practices at 13 different sites in North Queensland, Australia, participating. Geographical clusters of practices were randomly assigned to control or the interventions of education on GP dementia guidelines, audit feedback of the number of documented dementia cases in the practice population, or both education and audit feedback. The outcome measure was the change in the number of dementia diagnoses documented in electronic medical records in the population seen during the six months before and after commencement of the trial.

Findings
A representative sample of GPs participated in the trial with 56 (92%) completing. There was a significant improvement in documentation of dementia cases following the intervention of audit (p=0.041), with increased significance when this was combined with education (p=0.011). Education alone produced no significant improvement (p=0.317).

Implications for policy and practice
Although education is widely used to increase knowledge, our trial demonstrated that this did not significantly change practice. However, audit feedback significantly improved practice, with greater effect when combined with education.

To be or not to be ... a general practitioner. What assists the choice?

Meredith Temple-Smith¹, Doris Young¹, Lucio Naccarella², Rebecca Gracey³, Amie Bingham², Caroline Laurence³, Neil Spike⁴
¹Department of General Practice, University of Melbourne, ²The Australian Health Workforce Institute, University of Melbourne, ³Discipline of General Practice, University of Adelaide, ⁴Victorian Metropolitan Alliance

Aims and rationale
To prevent the predicted GP workforce shortages over the next decade, GPET aims to attract 35% of Australian medical graduates to apply for the General Practice Training Program by 2013. This study examined the reasons for uptake of general practice training.

Methods
In-depth interviews with 20 registrars, from both general practice and other specialties explored: perceptions of general practice/specialty training when a student; expectations of lifestyle, remuneration, social status, and job satisfaction; exposure to appropriate role models in general practice/other specialties; the timing and nature of GP placements in their medical course, and influence of hospital specialists/clinical dean while a medical student/intern/HMO. Interviews were audio-taped, transcribed, and analysed using NVIVO.

Findings
Shift work and other pressure demands of the hospital system were reasons for choosing general practice, yet all participants had heard hospital clinicians denigrate GPs. Reasons assisting people in deciding to undertake general practice training included: specific aspects and structure of the training, as well as what could be achieved as a GP after training was completed. Continuity of care, variety of work, and flexibility were seen as attractive. Early experiences with their own GP in childhood were very inspiring, as were many GP placements as medical students. Many participants had not realised as students that general practice activities exist beyond the patient consultation and can be broad and influential (research/policy/government) or that training is so flexible.

Implications for policy and practice
There are multiple points along a student’s career trajectory where factors can influence future career choices. Study findings include a number of specific recommendations to encourage medical students to consider general practice.
Where are they now? Career paths of the first James Cook University medical school graduates

Aileen Traves1,2, Sarah Larkins1, Tarun Sen Gupta1, Richard Hays1,3
1School of Medicine and Dentistry, James Cook University, 2Tropical Medical Training, 3Bond University

Aims and rationale
The James Cook University medical school opened in 2000 with a focus on rural, remote, Indigenous and tropical health. The school successfully recruited a high proportion of northern and rural background students. The first graduates entered the workforce in 2006. The aim was to collect information regarding the career paths of these graduates during their first five postgraduate years, and determine what factors influenced postgraduate employment and training.

Methods
A longitudinal mixed methods study with data collection from the first cohort of graduates of the James Cook University medical school (n=58). The quantitative data was collected via an online survey and analysed using simple bivariate statistics. A subgroup of participants was interviewed to further explore their experiences. Interviews were transcribed in full and analysed with an iterative thematic analysis.

Findings
Many graduates have worked in rural, remote, Indigenous and tropical health related employment, with the majority remaining in Queensland. While only 17% of the cohort intended to work in general practice at the beginning of medical school, nearly 45% of the graduates have undertaken general practice training. More than 80% of graduates intend to participate in teaching, and nearly 50% intend to continue participation in research.

Implications for policy and practice
The focus on rural, remote, Indigenous and tropical health and strong promotion of general practice throughout the James Cook University medical course encouraged graduates to pursue careers in these fields. Providing adequate local postgraduate training opportunities does improve local retention.

Student-delivered social work services in three GP super clinics: patient demand and utilisation

Susi Wise1, Fotina Hardy1, Huon Longman1
1Queensland University of Technology

Aims and rationale
There is a lack of social work services located within primary health care (PHC) settings despite the role social workers play in addressing many psychosocial determinants of health. This study explored clinic patients’ perceived need for social work services in PHC settings and investigated the effectiveness of delivering social work services via social work student placements.

Methods
To determine perceived need for social work services, patients were surveyed at two GP super clinics. Respondents identified social work services sought in the past and those that they thought they might seek in the future. QUT Masters of Social Work students then undertook fieldwork placements in three GP super clinics which had not previously offered social work services, reporting the services they provided.

Findings
The survey revealed patient (n=195) demand for social work services: grief counselling (50.3%); access to aged care (42.1%); and support for carers (39.5%). During placement, students (n=5) performed 89 initial consultations, with most clients requiring two or more consultations (60%). GPs referred 72% of clients, with most clients aged 60+ (42.39%). Common presenting issues were: counselling for depression, anxiety, self-esteem (18.26%); housing and accommodation (16.52%); and assistance with government agencies (16.52%).

Implications for policy and practice
This study demonstrated both the perceived need for, and actual use of, (student-facilitated) social work services delivered in a PHC setting. Given the demonstrated social work utilisation by those aged 60+, this study is expected to stimulate discussion about the inclusion of social workers in the PHC business model for the delivery of improved health care for older people.

Dr Aileen Traves graduated in the inaugural class of James Cook University’s School of Medicine in 2005. Initially from Canberra, she undertook general practice training with Tropical Medical Training, including completing an academic post. She lives in Cairns.

Susi Wise completed her Bachelor of Psychology (Honours) at QUT and is currently Program Manager for the QUT-GP Super Clinics Project. This initiative, funded by the Department of Health and Ageing, provides clinical training placements in primary health care for QUT students.
11 Remote and rural health 2

Development of a rural clinical school in an area of workforce shortage: strengths and struggles

Michelle Guppy¹, Maree Puxty¹
¹School of Rural Medicine, University of New England

Aims and rationale
The vision of the Tablelands Clinical School is to develop a centre of excellence for clinical training for Years 1–5 in a RRAMA 4 region in association with the JMP School of Rural Medicine based at UNE and the Armidale Rural Referral Hospital. This is an area of significant medical workforce shortage and is chronically poorly resourced. By developing a clinical school in the Tablelands region we will be able to address both medical workforce shortage and community access to high quality health care in a rural environment.

Methods
A needs assessment survey was developed which was distributed to the stakeholders in the Armidale and Tablelands medical community. The questions ranked the infrastructure and staff required to develop a successful rural clinical school and to deliver the required Year 4 and 5 curriculum for the Joint Medical Program (JMP).

Respondents were asked to prioritise local infrastructure and medical workforce resources they believed were required for successful teaching of the Year 4 and 5 curriculum of the JMP. Responses were graded from 'little need' to 'critical need'.

Findings
As a result of the initial needs assessment survey an analysis of the strengths and weaknesses of the ability of the existing medical workforce and teaching resources to deliver the University of Newcastle curriculum were identified.

Implications for policy and practice
A plan was developed to further investigate these two priorities and both short-term and long-term solutions were identified and implemented to improve the Armidale medical health workforce and required teaching space.

Michelle Guppy is the A/Prof of General Practice at the University of New England, and a GP in Armidale.

Utilisation of the health care system for early clinical placements

Richard Hays¹
¹Bond University

Aims and rationale
Early clinical placements are generally regarded as good for students as they link curricula to future practice and test vocational choice, although have been criticised for exposing junior students to challenging situations. As medical education has expanded, pressure has increased on the capacity of the health care system to provide sufficient, meaningful clinical encounters.

Methods
Data on 2009 clinical placements data for students enrolled in the first half of medical programs were extracted from the Medical Schools Outcomes Database, a project of Medical Deans ANZ. These were analysed to provide a detailed description of where and when medical students are in the health care system.

Findings
There were totals of 7,151 (Year 1), 7,469 (Year 2) and 2,935 (Year 3) placements, occupying, respectively, 9,444, 26,865 and 60,358: a total of 96,667 days of clinical supervision and patient access in the Australian health care system. Placements increased in duration from Year 1 to Year 3 (1, 4 and 21 days respectively. Placements were in a wide range of settings, including hospitals, general practices and community settings. In particular, Indigenous health clinics are heavily utilised.

Implications for policy and practice
It may be prudent to consider the relative importance of early and later clinical placements. Early clinical placements may achieve objectives by using broader health and social care settings. We would be seeking feedback from the audience with questions about the values of specific clinical placements that they would like considered in analysis.

Professor Richard Hays has forged a distinguished career as one of Australia’s leading experts in medical education. As an academic medical practitioner, his expertise in medical education is founded on an in-depth understanding of the current realities of medical practice.
What do patients think? Literature review of patient perspectives of safety and quality in general practice

Andrea Hernan¹, Christine Walker², Amr Elnour¹, James Dunbar¹
¹Greater Green Triangle University Department of Rural Health, ²Chronic Illness Alliance

Aims and rationale
In recent years there has been increasing awareness of patient safety and quality as an important issue for health care providers. This has been extensively reported and researched in primary health care worldwide. Little is known specifically about safety and quality in general practice regarding patient values, experiences and satisfaction in Australia.

Methods
A literature review was undertaken to find the current evidence surrounding patient perspectives of safety and quality in general practice. A range of relevant published and grey literature from electronic databases, websites, specific organisations, government reports and documents was reviewed and analysed against review criteria.

Findings
The literature review resulted in numerous studies and publications reporting on safety and quality in general practice from a patient perspective. Many of these studies were quantitative in nature and mainly conducted overseas. The findings from Australia have shown that there is a lack of qualitative exploration into patients experiences of safety and quality in general practice.

Implications for policy and practice
The results from this review demonstrate that there is a need to further investigate patient perspectives of safety and quality in general practice. In order to address this gap in current knowledge, the methodology for a qualitative study that will be conducted in south-east Australia will be presented. This project’s outcome will be used to improve the appropriateness, adequacy and effectiveness of health care provided to patients.

Andrea Hernan is a Research Associate at the GGT UDRH in Warrnambool. Andrea joined the APHCRi Centre for Research Excellence as a Masters student in January 2012. Her research interests include primary health care, public health, social determinants of health, rural health and health promotion.

An evaluation of GP peer reviewers’ perceptions of the limited adverse occurrence screening program

Lesley Hawes¹, Ruth McNair²
¹General Practice Victoria, ²Department of General Practice, University of Melbourne

Aims and rationale
Victoria’s small rural hospital medical services are provided by local GPs employed as visiting medical officers. The Victorian Department of Health funds an independent peer review program, the limited adverse occurrence screening program (LAOS) for these hospitals.

The aims of this research were to understand why busy rural GP visiting medical officers gave up time to review others’ records; if the recommendations from LAOS helped them to interact with the hospital quality committees and how effective they perceive LAOS to be.

Methods
Semi structured interviews were conducted with five current and two past GP peer reviewers. Volunteers were interviewed by telephone and in person; the interviews were taped, transcribed and analysed thematically.

Findings
Reviewers are motivated by professional safety considerations; they enjoy the collegiality and making an altruistic contribution to patient safety in small rural hospitals.

Reviewers felt that LAOS improves patient care, reduces adverse outcomes, helps bolster patient safety, achieves system change, highlights equipment deficiencies, identifies required training programs, and improves GP—hospital communication.

LAOS is limited by the lack of response by some treating GPs to the feedback on their reviewed records. Further, GP reviewers called for a clear accountable process to bring about state wide system change to improve adverse event response.

Implications for policy and practice
LAOS peer reviewing is highly valued by the peer reviewing GPs; the recommendations for system improvement provide a focus for cooperative GP—hospital quality discussions and the resulting system changes improve patient safety.

Lesley Hawes is the Statewide coordinator of the Limited Adverse Occurrence Screening Program—an independent GP peer review program for the visiting medical officers of Victoria’s small rural hospitals. She was also a PHCRED fellow at the Department of General Practice, University of Melbourne in 2011.
12 Collaborations 1

Allied health assistants supported telehealth consults: outcomes of a pilot study

Jennifer Newton¹, Leon Piterman¹, Louise Farnworth¹, Kara Gilbert¹, Josephine Antoniades¹
¹Monash University

Aims and rationale
Access to rural and remote health services can be challenging for both the practitioner and the client. Under a workforce innovation grant funded by Department of Health Victoria, this project sought to increase the skill capacity of allied health assistants (AHAs), through the development and implementation of a learning resource for allied telehealth care provision using AHAs supported by qualified allied health practitioners (AHPs).

Methods
Adopting a realist evaluation approach the project was conducted in two phases. Phase 1 involved pre-piloting of learning materials through a two day workshop with undergraduate allied health students and allied health assistant students (n=12). Phase 2 entailed piloting telehealth consultations with AHAs supervised by AHPs in rural and metropolitan sites in Victoria, following practitioners’ participation in a learning module ‘Allied Telehealth’. Data was collected through pre- and post-learning surveys, focus group interviews and individual interviews with a range of participants including clients. Thematic analysis was undertaken of interviews and quantitative data entered into SPSS V19.

Findings
Preliminary findings of phase 1 indicate that participants had a better understanding, knowledge and attitude towards telehealth. Communicating via telehealth takes on a whole new perspective for allied health. Outcomes of phase 2 will known by late June 2012.

Implications for policy and practice
The findings of this study will provide insight into the complexities and logistics of telehealth consultations with allied health professionals and their clients.

Alex McLaren², Tim Usherwood²
¹Improvement Foundation, ²University of Sydney

Aims and rationale
The Practice Health Atlas (PHA) is a business and clinical service decision support tool for general practices. Practices implementing the PHA use these data for population health analysis and to review business processes. The aim of this study is to evaluate how the PHA is perceived by GPs and staff and to examine changes associated with its use including effects on practice organisation, implementation of quality improvement processes and changes in service provision.

Methods
The research involves semi-structured interviews and collection of de-identified clinical and MBS item utilisation data to examine changes associated with its use. The sample consists of ten general practices located in Western Sydney.

Data were collected at first use of the PHA and again five months later for comparison between the two points.

In addition, at the five-month mark general practitioners and their staff are being interviewed to explore their perceptions of the tool and its usefulness, including effects on practice systems, implementation of quality improvement and health prevention processes as well as changes in service provision.

Findings
The data reflects changes at the practice systems level in which increased awareness of unclaimed item numbers has been one of the drivers. Trends towards revising billing systems and nurses’ roles, and up-skilling of administrative staff were evident. Changes in clinical management behaviour included improvements in at-risk patient identification, and in data coding and recording.

Implications for policy and practice
Identification of gaps in current service provision does foster effectiveness of care whilst improving access and equality.

Dr Jennifer Newton is a Senior Research Fellow, in the School of Primary Health Care and the School of Nursing and Midwifery, Monash University. Her research experience spans a diverse range across workplace learning, interprofessional learning, chronic disease self-management, and reflective practice.

Alex McLaren is the Quality Improvement Engagement Manager at the Improvement Foundation Australia and founder member of the QI Network for Medicare Locals. She has an interest in systems and innovation and was a RDP Fellow 2010–2011.
A week in the life of two GP super clinics

Riki Lane1, Grant Russell2, Mark Harris3, Anne Bardoe1, Jenny Advocat1, Nicholas Zwar2,4, Gawaine Powell Davies2
1Southern Academic Primary Care Research Unit, School of PHC, Monash University, 2Centre of Primary Health Care And Equity, University of New South Wales, 3Department of Management, Monash University, 4School of Public Health and Community Medicine, University of New South Wales

Aims and rationale
Australia’s GP super clinics (GPSC) are designed to improve access, promote inter-disciplinary care, and optimise chronic disease management. We sought to illustrate how the transition from a traditional general practice model into a GPSC influences organisational and clinical routines relating to the collaborative care of persons with chronic illness.

Methods
The study, set in two outer urban GPSCs, used an ethnographic approach within a theoretical framework drawing on complexity theory and organisational routines. Over 12 months, a social scientist analysed practice documents; observed management meetings, clinical and administrative activities and provider-patient interactions. Observational data were complemented clinician and practice staff interviews. Analysis used a constant comparative approach.

Findings
These two very different clinics faced competing priorities that compromised the implementation of an innovative delivery system. Both were shaped by context, particularly by the values of the management and by organisational history. Clinic construction dominated early phases. While the funder’s concentration on ‘getting clinics built’ provided focus, it distracted leaders from facilitating new clinical care models. Although both GPSCs sought niches of institutional support and acknowledged unmet needs in their community, they faced constant financial pressures as they tried to attract a patient following.

Implications for policy and practice
This study contributes to debates about how to assess and improve the implementation of current primary care policy. Our findings suggest that policy makers should expect a wide range of GPSC types, and identify a need for external support for introducing the complex changes required for a reformed model of care.

Does postural care equal good care?

Samantha Neylon1, Lisa Woollams1, Margaret Ingleton1
1Brightwater Care Group

Aims and rationale
Postural care is well researched in the paediatric sector as having positive benefits for clients. This study sought to determine if postural care concepts could be applied to the residential aged care sector with similarly beneficial outcomes.

Methods
A pre and post evaluative study using concurrent qualitative and quantitative mixed methodology was conducted within a residential aged care facility (RACF). AQF Certificate IV: Course in Implementation of Postural Care-52295 (accredited competency based course registered with the National Training Information Service) was developed and delivered to all care workers. Competency audits, surveys, focus groups for process and workforce mapping sessions and Night Time Positioning Assessment were all completed pre and post interventions.

Findings
The role of the care worker was successfully expanded to include implementation of postural care at the RACF to a required standard. There was an increase in postural care activities shared across the facility with physiological and wellbeing improvements demonstrated for the clients. There was an eventual reduction in some aspects of the physical component of a care worker’s job with a reported increase in satisfaction.

Implications for policy and practice
Engagement, improved adaptability of staff and utilisation of their skills, consistent service delivery, implementation of postural care safely and to a standard with positive deliverables for clients suggest that postural care does equate to good care!

Samantha Neylon has worked in the therapy and education sector for several years and developed Seatec which is a unique clinic providing a range of specialist clinical services (particularly seating and equipment) to both older and younger people with disabilities.
13 Indigenous health

Planning, implementation and effectiveness in Indigenous health national partnership agreements—implications of examining a committee interlock network for Aboriginal participation

Mark Lock1, Margaret Kelaher1, Hana Sabanovic1
1Centre for Health Policy, Programs and Economics, The University of Melbourne, 2Centre for Health Policy, Programs and Economics, The University of Melbourne, 3Centre for Health Policy, Programs and Economics, The University of Melbourne

Aims and rationale
Our aim is to develop a theoretical framework for effective agreements in Indigenous health and planning process in Indigenous health, particularly in relation to how they operate as mechanisms to support community participation in higher level policy. Indigenous health is arguably the most pressing area for reform in federal relations as articulated in the National Indigenous Reform Agreement and the National Partnership Agreement to Close the Gap in Indigenous Health (NPA). Our project seeks to understand these reforms by better understanding decision making processes, relationships and the values of different stakeholders involved in state committee structures.

Methods
In this case study we used the mathematical tools of social network analysis to map and analyse the connections between committees and organisations involved in the Indigenous health national partnership agreements. A combination of document analysis, internet searching, and stakeholder feedback provided organisation membership of committees.

Findings
We mapped a committee interlock network of 40 committees and 215 organisations, with a sparse density of 4.7% nevertheless being completely connected. The Aboriginal organisations were 27% of all organisations, had the potential to reach all other organisations, and affect all committees, with community values.

Implications for policy and practice
We demonstrate the value of the committees in being hubs through which Aboriginal community values can diffuse into higher level policy. Furthermore, the visualisation and quantification of this network is a new dimension in debates about concepts such as ‘participation’, ‘networks’, and ‘influence’.

Dr Mark Lock is an Aboriginal researcher who combines substantial policy experience in Indigenous health, a high standard of education, and Indigenous heritage, resulting in a dedicated and enthusiastic protagonist for improving the circumstances of Indigenous Australians.

Findings from the be our ally beat smoking study

Therese Kitaura1, David Atkinson2,3, Carmel Nelson3, Graeme Maguire4, Dennis Gray5, Sue Metcalf5, Richard Murray5, Julia Marley2,3
1Derby Aboriginal Health Service, 2The Rural Clinical School of WA, The University of Western Australia, 3Kimberley Aboriginal Medical Services Council, 4School of Medicine and Dentistry, James Cook University, 5National Drug Research Institute, Curtin University

Aims and rationale
Quit smoking programs in Australia have not had the same impact on Aboriginal smokers as on non-Indigenous smokers. The be our ally beat smoking (BOABS) study is a randomised controlled trial aiming to evaluate an intensive supported smoking intervention at two Kimberley Aboriginal Community Controlled Health Services (ACCHS) in comparison with a standard primary care based brief intervention strategy.

Methods
Participants who were assigned to the ‘intervention’ group received smoking cessation counselling at face-to-face visits, weekly for the first four weeks, monthly to six months and two monthly to 12 months. The ‘control’ group received ‘usual care’.

Findings
We recruited 167 participants into the study, with the last participant due to exit the study in May 2012. Of the 158 participants who have exited, 80% were followed-up after 12 months. We hypothesised that 13% of the intervention group and 3% of the control group would quit smoking at 12 months. To date 16.7% and 5.9% of participants self-reported that they quit smoking and had urine cotinine levels <50 mcg/L confirming abstinence, in the intervention and control group respectively (p=0.051). The quit smoking rate of the 84 clients at one of the sites who were enrolled in the Agriculture Protection Board funded smoking cessation program (2003–2007), run by a non-Indigenous nurse, was only 2.7% at 12 months (93% follow-up).

Implications for policy and practice
These data demonstrate that culturally appropriate quit smoking programs can be successfully implemented in remote ACCHS and that Aboriginal smoking prevention officers may help Aboriginal people quit smoking.

Therese Kitaura is a Giji and karajarri woman and long-term employee of Derby Aboriginal Health Service. She is a researcher on the BOABS Study, where she has utilised her extensive community knowledge and networks, and counselling skills to deliver BOABS.
Developing an oral health literacy intervention for Aboriginal adults in a regional community

Helen Mills1,2, Gary Misan3, Lisa Jamieson3, Lynette Stuart3, Roz Kager1
1Spencer Gulf Rural Health School, University of SA and University of Adelaide, 2Centre for Rural Health and Community Development, University of SA, 3Australian Research Centre for Population Oral Health, University of Adelaide

Aims and rationale
Deteriorating oral health has been reported in Aboriginal communities and studies have shown that poor oral health literacy (OHL) may be contributory. The aim of this study was to determine if 4 education sessions designed for Aboriginal adults would a) improve oral health literacy related outcomes of oral health knowledge (OHK), self-efficacy (OHSE) and sense of fatalism (OHF) in the short term and b) be culturally acceptable as measured by attendance, evaluation and feedback.

Methods
A ‘before and after’ intervention study design was used incorporating 4 oral health education sessions developed and delivered in association with Aboriginal project officers. Pre and post intervention questionnaires together with the TS-REALD health literacy screening tool were used to assess OHL. Participant feedback was obtained after each session and at the end of the program.

Findings
A convenience sample of 15 Aboriginal adults from Whyalla was recruited. A statistically significant improvement in OHK was noted (p=0.015, CI: −6.25 to −0.835) while OHSE indicated a positive trend for improvement (p= 0.055). The association between OHL and OHK was statistically significant (p= 0.01, CI: 0.36 to 2.18). Participant feedback supported improvements in OHK, OHSE and OHF. Participants indicated approval of the program by their attendance of the 4 education sessions and comments given in evaluations and interview feedback.

Implications for policy and practice
This study demonstrates that a culturally sensitive program of education can lead to positive oral health outcomes and as such should be considered in future health promotion strategies in these communities.

Helen Mills is a dental therapist who has an interest in Aboriginal oral health. She began her research career in a Research Development Placement with Spencer Gulf Rural Health School in Whyalla. In 2011 she completed her Honours in Health Science with UniSA, this project being her thesis.

National Guide to a Preventive Health Assessment for Aboriginal and Torres Strait Islander Peoples (2nd edition)

David Peiris1, Sophie Couzos2, Nikola Merzliakov3
1The George Institute for Global Health on behalf of NACCHO, 2National Aboriginal Community Controlled Health Organisation, 3The Royal Australian College of General Practitioners

Aims and rationale
The second edition of the National Guide to a Preventive Health Assessment for Aboriginal and Torres Strait Islander Peoples (‘National Guide’) was finalised in March 2012. It will ensure that health professionals are aware of the current evidence when providing care to Aboriginal and Torres Strait Islander people throughout their lifespan and assist them to maximise the opportunity for the prevention of disease in each clinic visit.

Methods
The development of the National Guide comprised three stages: 1) review of the first edition, 2) evidence review and formulation of recommendations by authors with experience within Aboriginal Community Controlled Health Services, and 3) editorial review, expert review and stakeholder consultation.

Findings
The National Guide presents recommendations for preventive health assessments for fourteen of the major chronic conditions experienced by Aboriginal and Torres Strait Islander people, supported by child and adult lifecycle wall charts with recommendations for each group.

Implications for policy and practice
It is supported by the latest evidence and ‘good practice points’ to inform health professionals and policy makers on a defined set of activities to help prevent disease, detect early and unrecognised disease, and promote health in the Aboriginal and Torres Strait Islander population while allowing for variations based on regional and local circumstances. In addition to hard and soft copy publication, the integration of the National Guide into clinical software will further assist health professionals in playing a significant role to help ‘close the gap’ by applying this user-friendly guide to best practice in preventive health care for Aboriginal and Torres Strait Islander clients.

Nikola Merzliakov is Projects and Community Relationship Coordinator at the RACGP National Faculty of Aboriginal and Torres Strait Islander Health. She was coordinator for the project to revise and update the National Guide to a preventive health assessment for Aboriginal and Torres Strait Islander peoples, undertaken by the RACGP National Faculty of Aboriginal and Torres Strait Islander Health in partnership with the National Aboriginal Community Controlled Health Organisation.
High rates of lower limb amputation in Aboriginal people in Western Australia
Deb Schoen¹, Paul Norman¹, Sandra Thompson²
¹Combined University Centre for Rural Health- University of Western Australia, ²School of Surgery- University of Western Australia

Aims and rationale
As part of the Western Australian Department of Health’s Cardiovascular Health Network initiative (http://www.healthnetworks.health.wa.gov.au.rplibres ources.health.wa.gov.au/network/cardio.cfm), we reviewed the trends in amputations for arterial disease or diabetes-related complications in Western Australia for the period 2000–2008.

Nearly all (98%) of amputations in Aboriginal people were associated with diabetes. Among those aged 25–49 years with diabetes, the age specific amputation rate in Aboriginal people was 27 times higher for minor amputations and 38 times higher for major amputations than in non-Aboriginal people.

The literature suggests that peripheral neuropathy, ulceration and sepsis generally precede these amputations. National and international guidelines for the management of ‘the high risk foot’ identify foot risk assessment, education and coordinated care planning as essential best practice to reduce amputations in patients with diabetes.

Methods
Funding has been gained through the Rural Health Continuing Education program to deliver interprofessional workshops in the Midwest, Gascoyne and Pilbara areas of Western Australia to train generalist health professionals and Aboriginal health workers in the screening, assessment and culturally appropriate education of diabetic foot problems amongst Aboriginal people. Knowledge, attitude and practise surveys and audits of patient notes will be completed before and after the training workshops.

Findings
Preliminary results will be available by the conference date.

Implications for policy and practice
The emphasis will be on prevention and developing understanding of the significant role early intervention and education can have in preventing amputations and the development of clear referral pathways from generalist health services to high risk foot services.

Deb Schoen is a podiatrist with experience in private, community and tertiary podiatry. Deb completed her Masters in International Health at Curtin University in 2008 and is currently a student at the University of Western Australia with the School of Aboriginal, Primary and Rural Health.

14 Primary care practitioners 1

Interprofessional collaboration across organisational boundaries: a case study of diabetes
Julie McDonald¹, Mark Harris¹, Rohan Jayasuriya¹
¹UNSW

Aims and rationale
Optimal diabetes care requires well coordinated services from a range of medical and allied health professionals. The complex mix of public and private sector primary health services presents challenges to this being achieved. Better understanding of collaboration across organisational boundaries is required. The two research questions addressed were: In what ways do health professionals who work in different organisations collaborate? What influences these patterns of collaboration?

Methods
Mixed methods qualitative case study involving a survey and semi-structured interviews with a purposive sample of 45 health providers and 8 patients.

Findings
A complex mix of organisational and professional factors influenced decisions about whether to collaborate, with whom and to what level. Decisions involved assessing the benefits to be gained relative to the costs incurred. Costs included time and effort negotiating across different cultures and perceived threats to professional autonomy and status. Patients’ access to services and their experiences of continuity of care were influenced by the decisions of health professionals. The level of collaboration rarely went beyond a low level of coordination. This worked for patients with routine care needs, but less so for patients with complex health needs.

Implications for policy and practice
Policies to enhance coordination and collaboration across organisational boundaries need to explicitly consider the benefits and costs for all providers. While power relations are difficult to change, building respectful and trusting relationships between health professionals can help reduce the uncertainty of collaboration.

Julie McDonald is a Research Fellow with the Centre for Primary Health Care and Equity and a PhD candidate at the UNSW. This paper is based on her PhD research, which was supported by a NHMRC scholarship.
A multifaceted intervention to increase chlamydia testing in Australian general practice

Alaina Vaisey1, Anna Wood1, Rebecca Lorch3, Simone Poznanski1, Dyani Lewis1, Rebecca Guy2, Meredith Temple-Smith1, Jane Hocking1

1Centre for Women’s Health, Gender and Society, University of Melbourne, 2The Kirby Institute, University of New South Wales, 3Department of General Practice, University of Melbourne

Aims and rationale
The Australian Government has funded a randomised controlled trial to assess the feasibility, acceptability, effectiveness and cost-effectiveness of an intervention to promote annual opportunistic chlamydia testing in general practice. There are well-documented barriers to chlamydia testing in general practice including time, cost, and clinicians’ knowledge of chlamydia; a successful intervention must minimise these barriers.

Methods
Intervention practices are offered a suite of evidence-based resources over a 4 year period. All practices receive incentive payments and quarterly testing performance reports, an education pack, opportunities for professional development points, and assistance with an annual recall system. Practices can choose to install computer-based chlamydia testing reminder alerts and to implement a program of nurse-initiated chlamydia testing. An initiation meeting is held at the start of the intervention period; subsequent meetings are held according to practice needs.

Findings
To date, 142 clinics (585 GPs) in 52 postcodes have been recruited across four states. 45 clinics have been randomised to the intervention group. The intervention has been customised to each clinic with two thirds of clinics receiving the computer alert and half using practice nurses to initiate chlamydia testing. In the last quarter of 2011, chlamydia testing rates increased by 70% in the first cohort of intervention practices. Testing rates increased by 37% in practices with nurse-initiated chlamydia testing.

Implications for policy and practice
This first stage of intervention implementation has demonstrated the importance of engaging with staff and tailoring interventions to individual practice needs in order to achieve system changes.

Alaina Vaisey holds a Bachelor of Science in Public Health degree from The George Washington University (USA) and completed a Master of Public Health degree from the University of Melbourne in 2008. She is currently employed as a Research Officer with the ACCEPt.

Improving the GP diagnosis of otitis media—the acceptability and impact of tympanometry and pneumatic otoscopy

Penelope Abbott1, Sara Rosenkranz2, Jennifer Reath1, Hasantha Gunasekera3

1Department of General Practice, University of Western Sydney, 2Department of Human Nutrition, University of Kansas, 3Discipline of Paediatrics and Child Health, University of Sydney

Aims and rationale
To accurately diagnose middle ear effusion, best practice guidelines recommend pneumatic otoscopy (PO) or tympanometry (TYM) in addition to standard otoscopy; however, GPs rarely use either diagnostic tool. We sought to determine whether adding PO and/or TYM to standard otoscopy changed the GP’s diagnosis and, therefore, management of otitis media during routine practice.

Methods
Twenty-three GPs attended a 3 hour training workshop with an ENT surgeon, paediatrician, audiologist and researchers designed to increase their confidence and skill in the use of PO and TYM. Thirteen GPs enrolled in a crossover trial to determine the effect of the addition of PO or TYM to usual otoscopy for children aged 6 months to 6 years. Following both standard otoscopy and then either TYM or PO, GPs completed a questionnaire noting their examination findings and planned management. We asked the GPs about the acceptability and usefulness of PO and TYM.

Findings
The data from 339 examinations are currently being analysed and will be reported in this paper. Interviewed GPs reported both techniques improved their ability to diagnose otitis media with effusion (OME). There was a strong GP preference for the use of TYM over PO, however the high cost of TYM is likely to decrease its uptake.

Implications for policy and practice
Our preliminary results indicate that routine use of TYM is likely to improve GP diagnosis of OME and there is a strong GP preference for use of TYM over PO.

Dr Penny Abbott is a Senior Research Fellow in the Department of General Practice, University of Western Sydney and a GP at the Aboriginal Medical Service Western Sydney.
Reducing avoidable hospitalisations by empowering primary care: a program in Northland, NZ

Veronique Gibbons¹, Erena Kara², Ross Lawrenson¹
¹University of Auckland, Waikato Clinical School, 
²Independent researcher

Aims and rationale
The Primary Options Programme Northland (POPN) is a three-year funded program aimed at reducing hospital admissions by empowering GPs. The aim of the evaluation was to review the program experience to date, analyse utilisation rates, to assess cultural acceptability and establish if the program has provided value for money in terms of utilisation.

Methods
Mixed-methods included data linkage of POPN and hospital data; interviews with key personnel and with locally identified referrers and service managers, and reviewing documentation and literature around POPN and Primary Options-type programs elsewhere.

Findings
Five hundred and seventy-one GP initiated referrals were funded by POPN in a one-year period (1 September 2010 – 31 August 2011). Māori had equitable access to POPN when compared with Northland PHO population figures by ethnicity. Over one-third of referrals were from quintile 5. Cellulitis was the most commonly referred condition. 87% of referrals were successfully treated in primary care.

Implications for policy and practice
POPN met the need of the target population within the funding allocation. Partnerships established through POPN, which include private ultrasound, rest homes, social work, district nursing liaison, Māori providers and general practice, serves to strengthen services within primary care and to up skill the primary care workforce as recognised in governmental and local policies. The institution of a Clinical Governance Group and disease-specific advisory groups has strengthened the relationships between primary and secondary care. The opportunity of providing care locally for high needs, Māori and rural populations will benefit the Northland community.

Dr Veronique Gibbons works at the University of Auckland, Waikato Clinical School as a Research Fellow. Her doctorate examined the epidemiology and management of hypothyroidism in general practice. Her research interests include: Maori health, endocrine disorders, chronic disease and community health.

Misinformation directing public policy—a case study

Helena Britt¹, Christopher Harrison¹, Graeme Miller²
¹Family Medicine Research Centre, University of Sydney

Aims and rationale
Research has a role in checking validity of information with potential to influence policy. The 2012 Productivity Commission (PC) Report on Government Services include the ‘Key Performance Indicator’ (KPI) ‘Management of upper respiratory tract infections’.

Results reported were 1,224 PBS claimed GP antibiotics scripts for ‘oral antibiotics commonly used for URTI’ per 1,000 PBS concession card holders. We tested the KPI’s validity as a measure of GP performance.

Methods
Analysis of BEACH data April 2010–March 2011, 95,839 encounters from 958 GPs. Antibiotics defined as ATC group J01. Measures: antibiotic prescribing for URTI (ICPC-2 R74), ‘other RTIs’ (R72,R75,R76), ‘all RTIs’; proportion of all antibiotics that were for URTI, ‘other RTIs’ and ‘all RTIs’.

Findings
The antibiotics selected by PC to measure this KPI did represent those ‘most commonly used for URTI’, accounting for 91% of all antibiotics prescribed for URTI and 86.4% of those for ‘all RTI’. The measure has good sensitivity.

However acute URTI accounted for only 17% of these selected antibiotics, and other RTIs for only 22% i.e.83% of the KPI antibiotics were NOT prescribed for URTI, and 61% were prescribed for problems other than RTIs. The measure has very poor specificity, and does not measure what it purports to measure.

Implications for policy and practice
Badly measured PIs have potential to misdirect policy—PIs need to be based on sound research data. Translating research into policy is a fine objective but first let’s ensure the research is valid. Researchers have a duty to scrutinise the basis of policy decisions.

Dr Helena Britt is A/Professor and Director, Family Medicine Research Centre, University of Sydney and Chief Investigator of the BEACH program. She has over three decades health services research experience and has published widely (36 books and >120 refereed articles).
15 Migrant and refugee health

The experiences of Afghani refugees accessing primary care in south-east Melbourne

Prashanti Manchikanti1, Grant Russell1, I-Hao Cheng1, Jenny Advocat2
1Southern Academic Primary Care Research Unit

Aims and rationale
Refugees in Australia have complex health needs. A significant proportion of Australia's Afghani refugee population resettle in south-east Melbourne. Addressing refugees’ health concerns requires improving access to primary care. There is limited understanding of refugees’ experiences accessing primary care, especially concerning their attitudes towards the personal and practice characteristics of GPs and clinics (acceptability). This study aimed to identify the acceptability of primary care and its relevance towards primary care access for Afghani refugees in south-east Melbourne.

Methods
Student-led semi-structured interviews conducted to collect data concerning access to primary care from a maximum variation sample of Afghani refugee general participants. Further data were collected from key informants from Afghani community associations or in health care leadership positions. Data were analysed through hand coding thematic analysis against an existing access framework.

Findings
Participants: Two key informants, sixteen general participants.

Themes: Four themes highlighted specific GP personal characteristics, clinical routines and clinic facilities play a role in Afghani refugees’ access to primary care. Different features were valued by recently arrived and established participants and the value of acceptability increases over extended resettlement. Other valued features of access for Afghani refugees include geographical accessibility and short waiting times.

Implications for policy and practice
Primary care services should consider integration of acceptable services within GP clinics. This should occur in a policy context improving access for Afghani refugees across diverse issues.

Sophia Samuel1, Grant Russell1,2, Jenny Advocat1, I-Hao Cheng1,2
1Monash University, 2Southern Eastern Melbourne Medicare Local

Aims and rationale
Refugees are likely to seek health care in ways distinctly different from the wider population. There is little research into health-seeking behaviours of refugees in Australia. We aimed to characterise and understand health-seeking behaviours in urban-living Tamil refugees who self-identified as unwell.

Methods
This qualitative project was set in south-east Melbourne, one of Australia's largest refugee communities. We used purposive sampling to identify individuals from a Tamil-refugee background who self-identified as suffering from chronic health problems for over six months. Participants underwent semi-structured interviews in Tamil and English. We used constant comparative approach to identify concepts and interrelationships within the data.

Findings
Participants reported seeking health by attempting to recover the norms of 'a good life' that was lost or, for some, never experienced. Although frustrated by financial constraints and waiting-times in public hospitals, the 15 participants reported seeking health care through mainstream methods. They also trusted and acted on recommendations of caseworkers and friends, and on Sri Lankan news media. Surprisingly some voiced ambivalence regarding the trustworthiness of doctors and medications.

Implications for policy and practice
This study fills a knowledge gap in refugee health-seeking research in Australia. Health and settlement providers can collaborate with trusted caseworkers, and community figures to offer targeted health promotion and care. Providers will benefit from understanding clients’ goals of rebuilding ‘a good life’ when building common therapeutic goals. The findings have been used to inform practice and policy at the community level in south-east Melbourne.

Dr Sophia Samuel is a GP Academic Registrar at Southern Academic Primary Care Research Unit in Dandenong, Melbourne. SAPCRU has a particular focus on refugee health research.

Prashanti Manchikanti is a medical student from Monash University who completed her BMedSc in 2011 focusing on access to primary care for refugees. She is currently studying her Diploma of Modern Languages before completing medicine in 2013.
Bilingualism and acquired language impairment (aphasia) in the ageing population: liaison with health and medical services

Amanda Miller Amberber¹,²,³
¹Brain and Ageing Research Program, University of New South Wales, ²ARC Centre for Excellence in Cognition and its Disorders, Macquarie University, ³Community Health, Prince of Wales Hospital, Sydney

Aims and rationale
Bilingualism is prevalent and increasing in Australia, particularly in the ageing population. Older individuals are at higher risk of language and communication impairment due to strokes and dementia. For bilingual adults, impairment often presents differently in each language. This research aimed to examine patterns of language and communication change in bilingual adults with acquired language impairment (aphasia) and the impact on social interaction, wellbeing and independent functioning.

Methods
A case-control design was utilised with mixed methods analysis for five bilinguals with aphasia (aged 49–80, spoke English and either Rarotongan Cook Islands Maori, Maltese, or French) and five controls from the same language communities. Quantitative analysis of performance in each language and ability to switch languages was compared for aphasic and control participants. Qualitative analysis of semi-structured interviews with aphasic participants and carers was conducted.

Findings
Bilingual participants with aphasia were impaired in each language and ability to switch languages in conversation. Impaired communication skills severely impacted on their ability to participate in daily community activities (e.g. shopping), to function independently at home (e.g. use the telephone), and on quality of life and wellbeing for the individual and carer. Bilinguals with aphasia had difficulty accessing health services and discussing medical concerns with their GPs.

Implications for policy and practice
Additional community services are required to support bilinguals with aphasia and carers. Awareness of the impact of communication impairment in bilinguals, the need for cognitive and communicative assessment in both languages, and use of interpreters and bilingual health assistants are recommended.

---

Epidemiology of mental health issues in refugees in south-eastern Melbourne

Joanne Enticott¹, I-Hao Cheng¹, Josef Szwarc², Grant Russell¹
¹Southern Academic Primary Care Research Unit, Monash University, ²Foundation House

Aim and rationale
Refugees are prone to mental health problems as highlighted in recent reports. Yet the burden this places on health care services is unclear. We used key public hospital encounter data to evaluate whether refugees are proportionately represented among those discharged from hospital with a mental health diagnosis after adjusting for confounding variables.

Methods
This project examines prospectively collected data from the Victorian Admitted Episodes Dataset (VAED) and Victorian Emergency Minimum Dataset (VEMD). The sample consists of residents in the Cities of Greater Dandenong and Casey in 2008/2009. Multivariate logistic regression and bootstrapping techniques will create predictive risk model(s) for mental health outcomes using the range of demographic and comorbidity data as candidate variables.

Findings
Collated data consists of N=88,910 VAED and N=101,378 VEMD patient entries. Primary analysis showed an apparent high rate of mental illness in the refugee population e.g. univariate relationship showed that refugee residents had 2.1 greater odds for an anxiety diagnosis and 1.7 greater odds for depression compared to non-refugees.

Implications for policy and practice
The logistic regression analysis to be undertaken is important as it will determine if the refugee population is indeed significantly affected more by mental health issues, or if, it is the presence of confounders that causes the higher incidence of mental illness. Confounders of interest are: comorbid illness, employment status, age, sex, marital status and others. Targeted interventions are only possible once these factors are elucidated.

---

Dr Joanne Enticott is the Deputy Director and Research Fellow at the Southern Academic Primary Care Research Unit, Monash University. Joanne is a mathematician and senior clinical researcher with many years experience of teaching within these domains in a University environment.
Knowledge, attitudes and utilisation of breast and cervical cancer screening among West African migrant women in Australia

Olayide Ogunsiji¹, Lesley Wilkes¹, Debra Jackson², Kath Peters¹
¹University of Western Sydney, ²University of Technology, Sydney

Aims and rationale
Despite an increasing number of African-born women migrating to Australia, empirical data on their knowledge, attitudes and utilisation of breast and cervical cancer screening is lacking. The aim of this paper is to report their knowledge, attitude and utilisation of breast and cervical cancer in Australia. This will provide insight on the women’s cancer screening behaviour and inform health promotion strategies.

Methods
This qualitative study, informed by naturalistic inquiry engaged a convenience sample of 21 West African migrant women who consented to participate in a face-to-face in-depth interview which lasted for about 90 minutes. The interview was transcribed verbatim and through constant comparison, emerging themes namely: knowledge of cancer screening, attitudes towards cancer screening and utilising cancer screening were identified.

Findings
Majority of the women were aware of cervical screening in Australia while only three women were aware of breast screening. A significant number of the women did not see the need for cancer screening either because they did not believe that they could have cancer or because they had not seen or heard of any of their close family members participating in cancer screening. Majority of the women who have had cervical cancer screening were asked to do so by their general practitioners when they presented for obstetric care in Australia.

Implication for policy and practice
West Africa migrant women should be a special target group for cancer screening intervention in Australia.

Dr Olayide Ogunsiji is a lecturer at the University of Western Sydney. Her research interests are in women’s health, migrants’ health and African migrants’ health. She has published in high-ranking journals.
Concurrent paper sessions, Thursday, 4.00 pm

16 Women’s and men’s health 2

The role of GPs in the provision of care in the first months postpartum

Wendy Brodribb¹, Maria Zadoroznyj²
¹Discipline of General Practice, School of Medicine, University of Queensland, ²School of Social Science, The University of Queensland

Aims and rationale

GPs are ideally placed to play a significant role in the care of women and their infants in the first months postpartum. They often have an ongoing relationship with the family and are able to provide comprehensive care for the mother and infant. This study investigated the provision of postpartum services in general practice from a provider and consumer’s viewpoint.

Methods

This is a mixed methods study using quantitative data from a large cross-sectional survey of Queensland women and qualitative data from interviews investigating community postpartum care with 90 mothers and 5 GPs in Queensland. Qualitative data has been analysed thematically.

Findings

Of over 7000 women who completed the survey, 36% saw their GP during the 10 days following hospital discharge. Two thirds had back pain and 52% had breastfeeding problems during the first 4 months postpartum. Qualitatively, women spoke positively about the comprehensive care of themselves and their infant by the GP. Others thought the GP was not an appropriate person to visit with infant concerns and others had received rushed and piecemeal care. The GPs interviewed felt frustrated at the lack of coordinated care for mothers and infants at this time.

Implications for policy and practice

Women need appropriate, coordinated care in the community postpartum, preferably with the same carer. This presentation provides information to assist in the development of strategies and interventions to improve postpartum care within general practice.

Dr Wendy Brodribb is a Senior Lecturer in the Discipline of General Practice at the University of Queensland. She has a strong interest in breastfeeding and postpartum women, especially interprofessional collaboration for their care, for more than 30 years.

Screening for family violence in a maternal and child health nursing population: a multi-method cluster randomised controlled trial

Angela Taft¹, Rhonda Small³, Cathy Humphreys⁴, Kelsey Hegarty⁵
¹Mother and Child Health, La Trobe University, ²Department of Social Work, University of Melbourne, ³Primary Health Care Research Unit, University of Melbourne

Aims and rationale

Family violence (FV) is prevalent and health damaging for mothers and their children. Victorian maternal and child health nurses (MCHN) see over 95% of all new mothers and continue to see many until the child is 6. The MOVE project aimed to develop and test a model of MCHN good FV screening practice to increase screening inquiry, disclosure and referral of abused mothers, satisfaction with the MCHN and to examine any harms from screening. It also aimed to provide the first rigorous measure of FV prevalence among an MCHN client population.

Methods

Participatory action research with intervention group (IG) MCHNs, combined with a thorough review of evidence for FV nursing practice led to a model tested for 12 months across four IG MCHN teams and four comparison teams. A postal survey of 10,000 women (including SF12, CAS, DASS-SF) impact evaluation surveys with 114/160 (71%) of all nurses and 23 thematic stakeholder interviews assessed the intervention’s impact and outcomes.

Findings

Only 30–45% women reported being screened. MOVE increased screening questions about physical abuse (OR 1.42 95% CI 1.00–2.02) and coercion/control (OR 1.91, 95% CI 1.36–2.69), but the number of women disclosing and being referred was small. IG abused women felt more listened to (OR 2.36 95%CI 1.14–4.89). Nurses particularly valued a self-completion maternal health checklist which screened more distally.

Implications for policy and practice

Screening can be enhanced but more should be done for effectiveness and benefit for women.

Angela Taft MPH PhD is Associate Professor/Principal Research Fellow at Mother and Child Health Research (MCHR), La Trobe University, Australia and is an Honorary Senior Fellow in the Department of General Practice, University of Melbourne.
Do practice nurses have an active role in annual chlamydia testing in general practice?

Anna Wood¹, Rebecca Lorch², Alaina Vaisey¹, Simone Spark¹, Rebecca Guy², Meredith Temple Smith¹, Jane Hocking¹
¹Melbourne School of Population Health, The University of Melbourne, ²The Kirby Institute, University of New South Wales

Aims and rationale
Chlamydia is the most common bacterial sexually transmitted infection in Australia with rates highest among 16 to 29 year olds. Given nurses are increasingly undertaking preventive health care in general practice, an opportunity exists for them to become involved in chlamydia testing and its management.

The Australian Chlamydia Control Effectiveness Pilot (ACCEPt) is a randomised controlled trial of a chlamydia testing intervention in general practice. The trial aims to measure the feasibility, acceptability and cost-effectiveness of annual chlamydia testing in general practice.

Methods
ACCEPt is being conducted in 52 rural postcodes across 4 Australian States. General practices in the intervention group are given a multifaceted intervention designed to facilitate increased chlamydia testing. The nurse intervention includes practice incentive payments, education and a training package. The rate of nurse initiated chlamydia tests will be calculated and testing rates will be compared between practices with and without a nurse intervention.

Findings
150 clinics in 54 postcodes have been recruited with 585 GPs and 97 nurses enrolled. 45 practices have been randomised to the intervention group. 38 nurses have received training. Chlamydia testing rates have increased by 37% in those practices which have a nurse intervention.

Implications for policy and practice
This study will gather information and evidence on the role nurses can play in chlamydia testing in general practice and evaluate whether nurse initiated chlamydia testing can be cost effective. The results of this study will inform future Government funded programs through Medicare.

Anna Wood is a project officer on the Australia Chlamydia Control and Effectiveness Pilot (ACCEPt) working at The University of Melbourne, Melbourne School of Population Health in the Centre for Women’s Health, Gender and Society.

Intimate partner abuse training of Australian medical students

Karina Aprico¹, Jodie Valpied¹, Kelsey Hegarty¹
¹The University of Melbourne

Aims and rationale
Intimate partner abuse (IPA) is a leading cause of death, disability and illness for women of child bearing age. Yet only a minority of abused women are recognised in health care settings. This may be partly influenced by the level of IPA education medical students receive in their training. This study therefore aims to investigate the amount and nature of IPA training currently given to Australian pre-service medical students.

Methods
Twenty medical schools were identified in Australia using an online search. Of these, three were excluded due to only offering post-vocational training or not having finalised their curriculum. One medical school declined. A member of staff from each medical school participated in a telephone survey, focusing on the nature of any IPA training offered and any barriers to providing IPA training.

Findings
Of respondents, 13 delivered IPA content in some form, whilst 3 did not. Of the training programs that did not provide IPA education, none were intending to add IPA to their curriculum. Time spent ranged from 0 to 15 hours, with an estimated average time of 100 minutes. 92.3% of respondents indicated that time-restraints limited the quality of IPA content delivery. Barriers to IPA training were faculty commitment (61.5%), access to resources (38.4%), and funding (30.8%).

Implications for policy and practice
Training for IPA is often limited in scope and contact hours. A greater level of consistency across degrees may help ensure medical practitioners receive the basic training necessary to identify and begin to address IPA in their practice.

Jodie Valpied has a background in educational and psychological research and teaching. She currently works on the Researching Abuse and Violence (RAVE) team, Primary Care Research Unit, The University of Melbourne and is completing a PhD in Psychology. Her additional research interests include personality, mental health and community health.
17 Nursing in primary health care 2

Primary care early intervention for COPD management (PELICAN) study: progress on a cluster randomised trial

Nicholas Zwar1, Sandy Middleton2, Helen Reddel3, Onno van Schayck4, Alan Crockett5, Sarah Dennis6, Guy Marks1, Jeremy Bunker6, Iqbal Hasan6, Oshana Hermiz6, Teng Liaw1

1School of Public Health and Community Medicine, UNSW, 2Australian Catholic University, 3Woolcock Institute of Medical Research, 4University of Maastricht, 5University of Adelaide, 6Centre for Primary Health Care and Equity, UNSW

Aims and rationale
COPD is an important major health problem managed in general practice but diagnosis and intervention is often delayed. This cluster RCT is examining whether intervention by a practice nurse-GP partnership will improve outcomes for people with newly diagnosed COPD. In the intervention model there is active case finding in people aged 40 to 85 who are current or former smokers. These patients are invited to a case finding appointment with the practice nurse who has been trained in performing spirometry. Patients newly diagnosed with COPD are then offered early intervention or usual care depending on the practice randomisation.

Methods
A cluster randomised trial is in progress in Sydney. Outcome measures include disease related quality of life, smoking status, immunisation, disease knowledge and inhaler technique

Findings
Forty-one practices were recruited, four subsequently withdrew (two intervention and two usual care). Educational events have been held for practice nurses and GPs in the study according to group randomisation. To date letters of invitation have been sent to 8654 patients and 1182 have attended a case finding appointment (13.7% of those invited). Regular feedback being provided to practice nurses on quality of spirometry. So far 221 new diagnoses of COPD have been made (18.7% of those attending).

Implications for policy and practice
The training of practice nurses in spirometry and early intervention has been feasible. The rate of attendance at case finding appointments is lower than expected. The rate of new diagnoses is substantial. The study tests an important new role for the practice nurse and has implications on how COPD is detected and managed in Australian primary care.

Evaluation of a structured protocol for initiating basal/prandial insulin in type 2 diabetes patients in primary care with adjunct continuous glucose monitoring

John Furler1, David O'Neal1, Louise Ginnevan1,2, Hana Derraz1,2, Irene Blackberry1, Alicia Jenkins1,2, Neal Cohen3, Daniel Liew1,4, James Best1,2, Doris Young1

1University of Melbourne, 2St Vincent's Hospital Melbourne, 3Baker IDI, 4Royal Melbourne Hospital

Aims and rationale
The type 2 diabetes (T2D) epidemic, and limited specialist resources, require increased primary care insulin initiation. We aim to evaluate a structured protocol guiding teams of GPs and practice nurses in the initiation of basal +/- prandial insulin with diabetes nurse educator and endocrinologist support. We also aim to evaluate retrospective continuous glucose monitoring (CGM) in guiding insulin dosing in primary care.

Methods
Changes in HbA1c at 12 and 24 weeks are benchmarked against specialist care in ambulatory T2D patients. To date 20 primary care sites have commenced basal insulin (glargine, Sanofi-Aventis) in 71 T2D patients inadequately controlled on maximal oral therapy, randomised to either self-monitoring of blood glucose (SMBG) alone or with adjunct retrospective-CGM (iPro 2/Enlite sensor, Medtronic). 39 subjects at the 12 week study point were evaluated and compared to a reference group (n=61) seen by specialists. Statistical analysis was by paired t-test and ANOVA.

Findings
Insulin initiation was associated with significant improvements in HbA1c comparable to specialist care; Glycemic parameters in CGM and SMBG randomised patients were not significantly different. Prandial insulin (glulisine, Sanofi-Aventis) was initiated more often in the CGM group than the SMBG group. There were no major hypoglycaemic events.

Implications for policy and practice
This interim analysis suggests insulin can be safely initiated in primary care with clinical effectiveness comparable to specialist care. CGM use enhanced recognition of the need for prandial insulin and was positively regarded by health professionals.

Dr John Furler is a Senior Research Fellow supported by a Career Development Fellowship and a part-time GP.
**The ACT Health Walk-in Centre: evidence lost in translation**

Rhian Parker¹, Jane Desborough¹

¹APHCRI,ANU

Aims and rationale

The first Australian public nurse-led primary care walk-in centre opened in Canberra in May 2010. This centre was modelled on walk-in centres established in the United Kingdom (UK) National Health Service (NHS). Evidence from the evaluation of these centres was reviewed to inform the design of the ACT Walk-in Centre. This paper presents an analysis of the translation of evidence from the UK experience into the Australian setting.

Methods

The process of translating the evidence available from the UK experience into policy, and subsequent translation from policy into program implementation was tracked for issues identified as problematic in the ACT setting.

Findings

The marketing of the Walk-in Centre, its location and the use of clinical decision support software, exemplified a breakdown in evidence translation at the policy formulation level. In instances where the evidence made it into policy, such as the development of the nursing model of care and an appropriate governance structure, there was a breakdown at the implementation level. Factors associated with barriers to successful evidence translation included the influence of interest groups, a lack of understanding of advanced nursing roles, and a lack of insight about the evidence itself.

Implications for policy and practice

Having access to evidence from other jurisdictions when developing new and innovative models of health care is important if these models are to succeed. However, the successful translation of this evidence requires careful attention to local political, policy and clinical factors. Ongoing communication between the policy and implementation players can also ensure success.

---

**Together we can make a difference: a new model of integrated care**

Christine Lynch¹, Maureen Goodman²

¹RN,BHSc, MN PHC Nurse Specialist CMDHB,NZNO,NZ College PHC nurses, ²RN,BHSc, MN PHC Nurse Specialist CMDHB,NZNO,NZNO Resp section

Aims and rationale

Admission rates to Middlemore Hospital (NZ) via Emergency Care continue to rise. The quarterly Frequent Adult Medical Admission (FAMA) Report identifies the 1500 clients most recently admitted to a medical ward on two or more occasions, for five or more bed days in the previous 12 months. This project sought to partner with two independent general practice teams and their enrollees by way of a new coordination approach that facilitated better long-term care for people with chronic conditions.

Methods

Participatory action research that incorporated a descriptive survey.

Findings

Active collaboration between two independent primary care practices and a CMDHB consultant working with two primary health care nurse specialists enabled health and social services to be accessed and better integrated care for clients with long-term conditions and reduced avoidable hospital admissions.

Implications for policy and practice

The new model of care demonstrated a respectful partnership between primary and secondary sectors. General practice teams stated the most important outcomes of the project were: 1) secondary care practitioners listening to, and understanding the 'real' issues they face in providing care: 2) facilitating better client access to and through secondary care services, and 3) partnering in case conferences co-development of care plans, conducting home visits and following up on often significant health and social problems. Overall, clients received necessary services because the model resourced active, integrated case management and follow up. It is clear that without ongoing investment integrated care for people with long term conditions cannot be sustained.

---

Jane Desborough (RN, RM, MPH) is a Research Fellow at the Australian Primary Health Care Research Institute (APHCRI). Prior to working in research, Jane worked as a registered nurse and midwife for 18 years in a variety of practice settings. Jane will commence her PhD with APHCRI this year.

Christine Lynch is a PHC Nurse Specialist at Counties Manukau District Healthboard (NZ) with a Masters degree in nursing and a focus on long term conditions. A key focus of Christine’s role is the development of innovative models of nursing care in our high needs community.
Knowledge exchange 1

Primary health care search filter: finding the evidence

Jennifer Tieman¹, Raechel Damarell¹, Mikaela Lawrence¹, Ruth Sladek¹, Ellen McIntyre¹
¹Flinders University

Aims and rationale
The role of primary health care (PHC) is increasingly being discussed and reviewed. Facilitating access to the underlying evidence base for primary health care by enabling efficient and effective retrieval of relevant literature could not only reduce the burdens associated with searching and increase the value of what is being retrieved, but increase the likelihood of incorporating evidence into practice and policy.

The aim of this study was to develop a search filter for the Primary Health Care Research and Information Service to retrieve literature relevant to primary health care.

Methods
The search filter was developed in the Ovid Medline platform. The methodology comprised five phases:

1. Constructing a gold standard set of articles known to be relevant to PHC
2. Identifying relevant index terms and textwords
3. Testing search terms and combinations
4. Determining the search filter by assessing the best performing search strategy, and
5. Translating the search filter for use in PubMed to enable ‘one click searching’ through the web.

Findings
The PHC search filter comprises eight Mesh terms and three textwords. It achieved a retrieval effectiveness of 78.3%.

An equivalence study validated its translation from Ovid Medline for use in PubMed, an open access bibliographic database.

Implications for policy and practice
The PHC search filter enables faster and more reliable searching for relevant literature to inform policy and practice. ‘One click searching’ of PubMed via hyperlinks held on the PHC RIS website provides universal access to supported searching for the PHC community.

Getting the evidence into policy and getting policy makers into the evidence—personal reflections of a primary health care knowledge broker

Peter McInnes¹
¹Australian Primary Health Care Research Institute

Aims and rationale
To describe the objectives of the knowledge brokering position created under the Primary Health Care Research, Evaluation and Development (PHCRED) Strategy and located within the Australian Primary Health Care Research Institute.

Increasingly knowledge brokers are seen as an important mechanism to ensure that academic research is translated into policy action through actively intervening in the shape and nature of research and policy maker networks. The paper will provide a reflection on the achievements of the first year of the PHCRED Liaison officer position.

Methods
Following a brief review of the literature that assesses the effectiveness of knowledge brokers in other knowledge translation contexts there will be a reflection on the challenges and successes of this knowledge broker’s first 12 months.

Findings
One role of knowledge brokers is to act as ‘boundary spanners’ identifying, selecting and obtaining information from the environment and transmitting it within the ‘user’ organisation. The re-establishment of the ‘conversations’ series where APHCRI network researchers present their research to the Department of Health and Ageing has been a key achievement. Evaluation data from the 2011–2012 series will be analysed.

Implications for policy and practice
The Australian Public Service is placing increased emphasis on improving links between academia and policy makers through exchanges with academic research institutions. Successful intervention in established networks to facilitate transfer of research into policy requires careful analysis of priorities, cultures and contexts of both researchers and policy makers.

Peter McInnes works as a ‘knowledge broker’ on secondment from the Department of Health and Ageing (DoHA). ‘Knowledge brokers’ are ‘inbetweens’ that link policy makers with researchers facilitating their interaction so that they are better able to understand each other’s goals and professional cultures.
Writing for peer review boot camp—fabulous or flop?

Emma Webster¹, David Schmidt¹
¹Clinical Education and Training Institute- Rural Directorate

Aims and rationale
Writing for peer review boot camp aimed to get ten novice rural researchers to each have a paper ready for submission to a peer reviewed journal in six weeks, with six of those accepted for publication in the chosen journal, six months from commencement.

Publishing in peer review is an important aspect of knowledge exchange and translation. Writing for peer review is daunting for first time researchers, especially those working in rural areas as they feel geographically isolated from their research peers. The Rural Research Capacity Building Program devised a structured approach to break writing a paper into a series of steps undertaken during teleconferences, as homework tasks and with a series of writing buddies over a six week period.

Methods
Compliance with homework tasks, attendance at teleconferences and feedback from writing buddies were monitored along with proportion completing a paper and having the paper accepted.

Findings
At the time of abstract submission, boot camp was in its second week and progressing well. Boot camp is scheduled to conclude on 4 April and follow up teleconferences to discuss reviewer feedback are scheduled for June and July 2012, when fulsome outcomes of boot camp will be known.

Implications for policy and practice
Writing for peer review is a challenging task for novice researchers. Boot camp provides a novel approach that transcends distance and isolation for a group of researchers to write together to achieve their publishing goals.

Dr Emma Webster has worked for CETI- Rural since 2006, coming to the role with a background in public health and health promotion. Emma has always worked in a rural area and understands the opportunities and constraints this context can offer.

Improving coordination through information continuity: elements of a multi-level response

Karen Gardner¹, Michelle Banfield¹, Laurann Yen¹,³, James Gillespie²,⁴, Ian McRae¹, Robert Wells¹,³
¹Australian Primary Health Care Research Institute, ANU, ²School of Public Health, University of Sydney, ³Menzies Centre for Health Policy, ANU, ⁴Menzies Centre for Health Policy, University of Sydney

Aims and rationale
There is good evidence that coordination can have beneficial impacts on client care and outcomes but systematic reviews reveal that the term is inconsistently defined and that the mechanisms by which coordination is to be achieved are poorly understood and rarely identified in relevant policies. One model suggests that continuity of information is a key element. In this paper, we report on the results of an exploratory study that developed a typology of information continuity in coordination and conducted four case studies to assess the extent to which information flows support coordination of care.

Methods
Structured review of systematic reviews and case studies examining flow of information in a multi-level typology.

Findings
We propose that information continuity operates in two dimensions to achieve coordination: horizontally between events/initiatives at the clinical level and vertically between mechanisms designed to stimulate coordination such as between care planning and case management at the micro level, planning and quality improvement at the meso level and financial incentives at the macro level. Case studies revealed that information such as patient history, risk behaviours and client preference is used to support care at the clinical level and tools such as case management provide coordination for individual cases. Disease registers and guidelines for chronic disease helped practices to identify patients for recall, review and to bill items of care but these data are not routinely used to assess quality of care or patient satisfaction, although there was some indication that these activities are conducted on a sporadic basis in some regional programs. Audit and feedback systems and other mechanisms required for quality improvement in relation to coordination are not in place.

Implications for policy and practice
Meso level organisations like Medicare locals could focus on putting into place the structures and systems to enable patient derived data to be used to develop strategies at the clinical and organisation levels to improve coordination. This typology may provide a resource for both policy development and implementation.

Karen Gardner is a Research Fellow with the Australian Primary Health Care Research Institute. Her PhD investigated the sustainability of a large-scale quality improvement program in Aboriginal primary health care. She is currently conducting research in mainstream and Aboriginal primary health care and is interested in bringing sociological perspectives to implementation research.
19 Collaborations 2

What impedes effective collaboration between clients and health care providers during care planning for chronic condition management?

Sharon Lawn1, Linda Sweet1, Timothy Skinner3, Malcolm Battersby1, Toni Delany1
1Flinders Human Behaviour and Health Research Unit, Flinders University, 2Rural Clinical School, Flinders University, 3Rural Clinical School, University of Tasmania

Aims and rationale
The Australian Government has invested heavily in care planning for chronic condition management, however, little is known about the effectiveness of this in facilitating multidisciplinary collaboration and client involvement. This APHCR funded research addresses these gaps by examining how information sharing operates in the implementation of care plans. The research identifies the barriers and enablers for effective collaborative practice and client involvement. It also explores the outcomes that emerge from current information sharing practices.

Methods
A combination of qualitative interviews, non-participant observation and focus groups were undertaken and analysed thematically. Clients and staff from five partner services across metropolitan and rural South Australia and rural Victoria participated. A national survey of primary health care workers was also undertaken.

Findings
The presentation focuses on a subset of findings which reveal a range of key barriers to collaboration between clients and health care providers. These barriers include: structural aspects of service collaboration, closed communication, ineffective procedures around consent, overlapping care plans, interactions that foster dependency, and a lack of client involvement in decision making. Potential strategies to overcome the effects of these barriers at the policy and practice levels will also be suggested.

Implications for policy and practice
Improving the effectiveness of collaboration is vital in strengthening partnerships for managing chronic conditions and in encouraging healthy behaviour change. Developing evidence to facilitate more effective collaboration between clients and health care providers will assist in improving coordination of care and in enhancing the ability of care providers to respond to their clients’ needs.

Linda Sweet is a nurse and midwife with broad experience in many different clinical environments, management and research. Whilst currently working full time as Senior Lecturer in the Flinders University Rural Clinical School, she maintains her clinical skills through conducting nurse-led sexual health clinics. Linda’s research interests include health professional teaching and learning, and interprofessional education and practice.

Evaluation of a new nurse-led approach to dementia detection and care in primary care

Paula Convery1, Dimity Pond1, Isabel Higgins1, Steve Iliffe2, Lynnette Chenoweth3, Parker Magin1, Susan Goode4, Claire Goodman2, Jill Phillips1, Ashley Kable1, Michael Hazelton1, Andrew Robinson5
1University of Newcastle, 2University College London, 3University of Technology Sydney, 4Hunter Postgraduate Medical Institute, 5University of Hertfordshire

Aims and rationale
Dementia prevalence in Australia is expected to grow by 254% between 2011 and 2050 when around 1 million Australians will have dementia. Evidence suggests GPs fail to identify up to 50% of mild dementia despite patient and carer preferences for clear and timely diagnosis. National and international interest in nurse-led care led to development of this new approach of multi-disciplinary detection and management of dementia in primary care.

Methods
Primary care practitioners from six general practices engaged in a participatory-action-research investigation of a model of nurse-led dementia screening, specialist assessment and care-planning. A range of screening and assessment instruments; recruitment methods; referral and reporting systems and multi-disciplinary case discussion formats were trialled. Mixed methods evaluation included semi-structured interviews, patient and carer satisfaction surveys and analysis of assessment results.

Findings
Thirty-four GPs, 14 practice nurses and 58 patients were recruited from which 48 patients agreed to cognitive and functional assessment by a specialist memory nurse. Thirty-three carers were also assessed for burden, coping and mood. Recruitment via case finding was more successful than screening and better supported by health professionals. Screening using brief screening instruments produced many ‘false positives’. The process of refinement of the model will be presented here as well as recruitment and assessment results and the challenges and enablers identified through qualitative analysis of the interviews.

Implications for policy and practice
Results from this study demonstrate the benefits of a nurse-led model of care in supporting improved coordination for the detection and care of dementia in the primary care setting.

Paula Convery is a registered nurse with a Masters of Public Health and a Graduate Diploma in Health Economics. She has extensive experience in remote area health promotion service delivery, policy development and research.
Research capacity building: the contribution of PHCRED-supported research to PHC policy and practice

Lynsey Brown1, Ellen McIntyre1
1Primary Health Care Research and Information Service (PHC RIS), Flinders University

Aims and rationale
In 2000 the Primary Health Care Research, Evaluation and Development (PHCRED) Strategy was introduced to address the gap in high quality research in Australian primary health care (PHC). One component, the Research Capacity Building Initiative (RCBI), provided funding to university departments of general practice and rural health to expand the pool of PHC researchers and produce more research relevant to policy and practice.

The aim of this study was to describe the volume and content of peer-review publications, a key RCBI output; and determine which of the PHC areas this research focused in relation to Australia’s current health reform and the key priority areas of the National PHC Strategy.

Methods
Document review of annual reports for the years 2006 through 2010 from the 26 PHCRED-funded university departments.

Findings
There were 661 papers published in 212 journals, with Australian Family Physician the most frequently cited. Quantitative research provided the basis for the majority of articles. Over 75% of publications encompassed topics indicative of the priority areas defined in the national PHC strategy. All priority areas were addressed, with the greatest proportion of papers relating to ‘increasing the focus on prevention’.

Implications for policy and practice
Since its inception the PHCRED strategy has enabled development of research capacity in PHC and contributed to the body of PHC knowledge. While PHC is a diverse field, reflected in the publications produced, the key themes underlying much of this work are representative of aspects of national health reform.

Lynsey Brown is a research associate with PHC RIS and is currently undertaking a PhD focusing on the wellbeing of spouse dementia caregivers, to be submitted in 2012. She has recently completed a Psychology Honours degree and a Graduate Diploma in Counselling.

Factors associated with wound healing times and costs

Hanan Khalil1, Helen Chambers1, Eleanor Mitchell1, Nicole Steers2, Marianne Cullen2
1Monash University, Department of Rural and Indigenous Health, 2La Trobe Community Health Service, Traralgon

Aims and rationale
Predicting factors that impact on wound healing times is valuable to patients’ managements and ongoing treatment. Optimal wound management requires modifications of patients’ lifestyle, medications and wound care management plans. The aim of this project is to analyse the data obtained from the Mobile Wound Care (MWC) program in order to identify the different variables associated with wound healing times and cost.

Methods
This research uses population level data collected through the Carepoint mobile wound care database from five organisations across Gippsland. De-identified data was collected using the MWC between April 2010 and August 2011. Data was collected at three main levels: patient, wound and treatment variables. Descriptive and bivariate statistics were used to analyse the wound data.

Findings
The MWC program provided data for 1,999 wounds collected from 1,159 patients. The analysis of the healing times were based on 806 closed wounds.

Results from the regression analysis on all types of wounds irrespective of the different aetiologies found that pressure/friction/shear, diabetes mellitus and infection were associated with significant differences on healing times. Whereas factors such as; pain, infection, anaemia and antibiotics were all significant predictors of cost of all wounds.

Implications for policy and practice
The MWC electronic documentation system has allowed a detailed analysis of the wound aetiologies in the Gippsland area which was not previously possible. This will facilitate regional benchmarking for wound healing times, assessments and consumable costs per aetiology and development and implementation of clinical pathways for specific wound aetiologies.

Dr Hanan Khalil is a Pharmacist Academic at the School of Rural and Indigenous Health. She is also the Director of the Centre of Chronic Disease Management, at Monash University. Her areas of research include evidence-based health care and chronic disease management.
20 Self-management 1

Self-monitoring of blood glucose by patients with type 2 diabetes
Joan Henderson¹, Christopher Harrison¹, Lisa Valenti¹, Clare Bayram¹, Graeme Miller¹
¹Family Medicine Research Centre, University of Sydney

Aims and rationale
The effectiveness of self-monitoring blood glucose (BG) in type 2 (T2) diabetes is inconclusive. The aim of this study is to examine the HbA1c levels of general practice patients with T2 diabetes who self-monitor compared with those who do not.

Methods
A sample of 5,730 patients from 194 GPs were surveyed through a SAND sub-study of the national BEACH program. Information requested: whether they had diagnosed T2 diabetes; most recent HbA1c result; height and weight for BMI assessment; BG monitoring routine; current management.

Findings
Prevalence of T2 diabetes was 8.1% (95% CI: 7.1–9.1). Mean HbA1c level was 7.3%. Almost half (47.1%) of T2 diabetes patients were obese (by BMI) compared with 26.7% of all patients at BEACH encounters in 2010–11. Of 344 non-insulin treated T2 diabetes patients, 79.4% self-monitored fasting BG and 67.7% of 314 patients self-monitored post-prandial BG.

For fasting BG—30.8% tested daily; 30.2% weekly; 18.3% tested <1 per week. For post-prandial BG—19.1% daily; 29.0% weekly; 21.7% <1 per week. For both groups, mean HbA1c level was significantly higher for those who tested daily than for those who never tested—7.4 (95% CI: 7.1–7.7) c.f 6.7 (6.5–7.0) in fasting group and 7.5 (7.2–7.8) c.f 6.8 (6.5–7.0) in post-prandial group.

Implications for policy and practice
Patients testing BG daily may be those struggling for control—for others the benefit may be questionable given costs. Reaffirming the limited benefit of self-monitoring in non-insulin treated patients may be appropriate.

Dr Joan Henderson is a Senior Research Fellow and Deputy Director of the Family Medicine Research Centre, University of Sydney. Her background is in health information management and her work concentrates on the design and dissemination of results from the National Beach Program and its sub-studies.

Self-management through the eyes of consumers
Anna Williams¹, Patricia Bazeley¹, Mark Harris¹
¹Centre for Primary Health Care and Equity, University of New South Wales

Aims and rationale
The medical literature highlights the importance of self-management and self-management support in reducing the burden of chronic illness on health systems. However, it is apparent that some self-management initiatives have been built on a number of questionable assumptions: (1) there is a universal definition of self-management by consumers; (2) consumers are willing and able to engage in self-management; and (3) actions consumers take will reduce reliance on the health system. We present a conceptual model of self-management developed through the eyes of consumers that challenges the published rhetoric.

Methods
Interviews were conducted with 16 patients included in an evaluation of a self-management group education program. Broad open-ended questions were asked concerning consumer views on self-management of their chronic illness, engagement in self-management activities and their use of self-management plans. Consumer demographic information, health status, type of chronic illness, self-efficacy and work and social adjustment were integrated with the qualitative findings. Mixed method analysis was undertaken using a grounded theory approach and supported by NVIVO. 8.

Findings
Chronically ill consumers focused their understanding of self-management on activities of daily living, their health, or whole of life. They had different expectations of what they could achieve relative to their illness. They engaged in different self-management actions that depended on the priority given to health, a proactive-reactive orientation and whether actions were sustained or episodic.

Implications for policy and practice
Future self-management initiatives need to account for approaches taken by consumers to achieve realistic, appropriate and achievable health and health service outcomes.

Anna Williams is a Research Fellow at the Centre for Primary Health Care and Equity, University of New South Wales and PhD candidate.
Chronic illness: time to care
Tanisha Jowsey$^{1,2}$, Laurann Yen$^{1,2}$, Michelle Banfield$^1$, James Gillespie$^3$, Ian McRae$^1$
$^1$Australian Primary Health Care Research Institute, $^2$Menzies Centre for Health Policy, Australian National University, $^3$Menzies Centre for Health Policy, University of Sydney

Aims and rationale
Consumer preference to have care at home, coupled with strategies to increase the role of primary care to reduce unnecessary hospital admissions means that informal carers take highly active roles in assisting older adults with chronic illness. Part of their complex role is health related activity (HRA). While there is evidence about the overall time spent by carers, little is known about the nature and demands of time on HRA.

Methods
A sample of members of the Lung Foundation, The National Diabetes Subsidy Scheme and National Seniors Australia nationally was surveyed in early 2011. The survey sought information about 20 activities related to health care; broadly classified as personal care, self-management and non-hospital health service use. 2,540 responses were analysed.

Findings
Findings will be presented in terms of the time carers spent on specific HRA and total time spent on HRA for self and other. In this study 95% of carers themselves had one or more chronic illnesses. Higher number of chronic conditions of carers was associated with higher overall time use.

Implications for policy and practice
Knowing where the time burdens lie for carers is essential to effective health service provision. A more detailed understanding of the nature of HRA undertaken by carers allows opportunities for clinicians to better engage carers in the management process. In addition, it identifies what knowledge and skills carers may need to undertake the informal component of care in chronic illness. Clinicians can then target management expectations for both patient and carer clients.

Tanisha Jowsey is Senior Research Officer on the Serious and Continuing Illness Policy and Practice Study (SCIPPS). She is also currently undertaking a PhD at the Australian National University concerning time use and temporal experience of people living with chronic illness.

Should general practitioners provide nutrition advice to patients with lifestyle-related chronic disease? Perceptions of GPs, key health professionals and patients
Lauren Ball$^{1,2}$, Roger Hughes$^{1,2}$, Ben Desbrow$^{1,2}$, Michael Leveritt$^{1,2}$
$^{1}$School of Public Health, Griffith University, Gold Coast Campus, Australia, $^{2}$Griffith Health Institute, Griffith University, Australia

Aims and rationale
General practitioners are extensively involved in the health care of individuals with chronic disease. Nutrition is a priority for the management of lifestyle-related chronic disease, and the demand on GPs to provide nutrition care is increasing. However, the role and expectations of GPs in providing nutrition care are unclear. The following presentation describes the outcomes of two studies that investigated the perceptions of GPs, key health professionals and patients regarding nutrition care provided by Australian GPs.

Methods
Firstly, semi-structured qualitative interviews were conducted with 28 health professionals across a range of disciplines, including GPs (n=11), practice nurses (n=3), dietitians (n=5), naturopaths (n=5) and exercise physiologists (n=4). Interviews were transcribed verbatim and analysed thematically. Secondly, 939 individuals with type 2 diabetes completed a 54-item online survey about their diabetes-related care received from GPs.

Findings
Health professionals, including general practitioners, perceived that nutrition care provided by GPs is mostly ineffective at improving patient nutrition behaviour. However, 84% of patients perceived that the ideal management of type 2 diabetes by GPs includes nutrition care, and only 43% of patients have received this care from a GP. The health professionals reported concerns over the nutrition related competency of GPs. However, over 91% of patients were satisfied with the nutrition care their GP had provided.

Implications for policy and practice
Without systematic changes to the Australian primary health care model, the demand on GPs to provide nutrition care will continue, therefore mandating support for general practitioners providing care in this context.

Dr Lauren Ball is an Associate Lecturer at Griffith University and has recently completed her PhD on the topic of nutrition care provided by Australian GPs. Lauren is also an accredited dietitian her research passion is preventive health in primary care.
21 Indigenous health 2

Supporting breastfeeding in urban Aboriginal and Torres Strait Islanders: implications for practice

Wendy Foley1,2, Lisa Schubert2
1Inala Indigenous Health Service, Qld Health, 2School of Population Health, University of Queensland

Aims and rationale
Aboriginal and Torres Strait Islander mothers are less likely than others in Queensland to have ever initiated breastfeeding or to exclusively breastfeed their babies at hospital discharge. As improving Indigenous child nutrition is a Closing the Gap priority, increasing breastfeeding initiation and duration has potential to contribute to improved health. The research aimed to understand influences on breastfeeding initiation and duration among a group of urban Indigenous mothers. This paper reports on results related to health sector in a study that explored the social context of breastfeeding behaviour.

Methods
Qualitative interviews within a strengths based framework were conducted in 2011 with 20 mothers of urban Indigenous infants 3 to 12 months. Interviews examined various influences on breastfeeding including antenatal advice, feeding support and experiences in hospital and on return home.

Findings
Culturally appropriate support encouraged inexperienced mothers to initiate and maintain breastfeeding and experienced mothers to increase the duration of breastfeeding compared with previous attempts. Mothers reported that particularly helpful health sector support includes positive encouragement (‘you can do it’, ‘don’t worry, bub will get it soon’), good access and continuity of care from health professionals they trust, consistent messages from a variety of health professionals and the timely availability of resources targeting Indigenous mothers.

Implications for policy and practice
This research underscores the importance of staffing capacity to be responsive to the particular circumstances of the urban Indigenous mothers and infants so that consistent breastfeeding promotion and support is accessible antenatally and postnatally.

Dr Wendy Foley is Nutrition Research Officer at Inala Indigenous Health Service. She has lectured and researched in the area of Indigenous nutrition for the last decade. Her research focuses on food practices in everyday life.

Early childhood growth in Cape York communities 1999–2010

Jason Agostino1,2, Alan Ruben1,4, Sarah Larkins1
1James Cook University, 2General Practice Education and Training, 3Apunipima Cape York Health Council, 4Flinders University

Aims and rationale
Early childhood nutrition is a crucial area in addressing the gap in health and educational outcomes for Indigenous Australians.

Cape York Peninsula underwent many changes between 1999 and 2010 including an increase in primary health care services, the introduction of the pneumococcal and rotavirus vaccines and the introduction of alcohol management plans.

This study followed the growth of children from birth to two years old in order to detect any change in abnormal growth over the period studied.

Methods
Data on weight, height and head circumference were sought at 3, 6, 9, 12, 18 and 24 months and combined with birth data. These were sourced from the local clinic records, Queensland Health’s Ferret database and the Queensland Perinatal Data Collection Centre.

Data were analysed using World Health Organization ‘Anthro’ software to generate rates of underweight, wasting, stunting and microcephaly. Groups were compared by year of birth.

Findings
Data were collected on 1288 children from nine remote Cape York communities.

There was a significant (p<0.05) downward trend in the rates of underweight children. From 16% in 1999 to a low of 3.4% in 2005.

Rates of stunting were above normal population levels (median 7.65%) and did not change over the study period.

Implications for policy and practice
The decrease in rates of underweight children supports the changes to health and social policy that occurred over the study period.

We believe the rates of stunting reflect elevated rates of intrauterine growth restriction and this is being investigated further.

Dr Jason Agostino is a general practice registrar working with Indigenous communities in far north Queensland and undertaking an academic term supported by General Practice Education and Training. His main area of interest is early childhood growth and development in disadvantaged populations.
Implications of an ecological comparison of middle ear disease in urban and remote Indigenous communities for policy makers

Geoffrey Spurling1,2, Deborah Askew1,2, Philip Schluter3, Fiona Simpson2, Noel Hayman1,2
1University of Queensland, 2Queensland Health, 3University of Otago

Aims and rationale
We aimed to compare prevalence of middle ear disease and risk factors in remote and urban Indigenous communities.

Methods
Informed consent was obtained from carers/parents of 453 children presenting for child health checks in an urban Indigenous health service (2007–2010). The AIHW provided us with aggregate data for 9130 child health checks from the NT emergency response child health check initiative conducted in remote Aboriginal communities (2007–2009). We compared aggregate middle ear disease prevalence for the two populations and available risk factors. In the urban context, we conducted multivariable logistical regression for available known risk factors looking for associations with middle ear disease. Appropriate ethical approvals for all sites were obtained.

Findings
The prevalence of abnormal middle ear appearance was 5.5 times higher (95% CI: 3.8, 8.0) among the remote NT participants than for urban participants. Environmental tobacco smoke and immunisation currency did not explain this difference. Within the urban context, previous ear infection and overcrowding in a dose-dependent manner were associated with abnormal middle ear appearance.

Implications for policy and practice
ABS reporting on overcrowding in Indigenous households indicate that 24% of NT households are overcrowded, 4.3 times the Australian average. Current ear health policies are focused on accessing better hearing and ear specialist services. While these reactive measures are essential, preventive policies involving communities in partnership to address socioeconomic disadvantage and particularly overcrowding is required to reduce the burden of middle ear disease for Indigenous children.

Dr Deborah Askew is the Research Director at the Inala Indigenous Health Service. She is a primary health care researcher, with a particular focus on improving the delivery of health care for Aboriginal and Torres Strait Islander people with chronic diseases.

Aboriginal cultural competence—developing a framework and audit tool for health services in regional Victoria

Michael Tynan1,2, Petah Atkinson3,4, Fran Smullen5, Kylie Stephens1, Jade Miller4
1University of Melbourne Rural Health Academic Centre, 2Kaiela Institute, 3Rumbalara Aboriginal Cooperative, 4Yorta Yorta Nation, 5Association of Social Workers

Aims and rationale
Aboriginal health outcomes in Australia remain unacceptably poor. The Hume Region in the north of Victoria has identified the development of an Aboriginal Cultural Competency Framework and associated audit tool for health services as a potential vehicle to improve the provision of care to Aboriginal patients.

Methods
A research team experienced in cultural competence theory and practice was formed between the Kaiela Institute, Yorta Yorta Nation and University of Melbourne Rural Health Academic Centre. They agreed a methodology with the Working Party overseeing its development consisting of:

- reviewing the existing work undertaken by the Working Party
- critically reviewing existing frameworks and associated policy/evaluation documents
- critically reviewing the cultural competence and related literature
- from the above developed a draft framework and audit tool that was iteratively worked on with the Working Party.

The interactive process of refining the framework and audit tool between the research team and Working Party was highly productive engaging diverse perspectives across Aboriginal community, health bureaucracy, health services and health practitioners.

Findings
A comprehensive framework with 8 standards and 21 indicators and an audit tool linked to those indicators were developed.

Implications for policy and practice
The audit tool provides a series of questions for health services to assess their performance against each standard and indicator in the framework. This review process by the service is expected to inform their development of an Aboriginal Health Cultural Competence Action Plan to be reviewed and reported on an annual basis.

Dr Michael Tynan has over 20 years of working in policy and research, mainly in Aboriginal health, the last 8 years based in Shepparton. He is Senior Research Fellow at the University of Melbourne’s Rural Health Academic Centre and the Kaiela Institute.
22  Building research capacity

Refugee primary health care needs assessment: methodological insights for population health planning

I-Hao Cheng1,2,3, Grant Russell1,2, Marion Bailes1,2, Andrew Block4,2
1Southern Academic Primary Care Research Unit, 2Monash University, 3Dandenong Casey General Practice Association, 4Southern Health

Aims and rationale
Vulnerable population groups require health care services to be tailored to their needs. This paper analyses a collaborative, pragmatic approach in assessing the primary health care needs of the refugees living in Melbourne’s south-east. We describe our methodology and highlight our experiences of overcoming the challenges.

Methods
In collaboration with the region’s multi-sectoral Refugee Health Research Consortium we used community health care needs assessment methodology to identify normative needs. We collected data from existing population, health and administrative datasets. We analysed comparative demography, epidemiology, health service capacity and health service utilisation. We identified gaps in data.

Findings
Methodological challenges included: identifying the refugee population within disparate datasets, extracting primary care relevant data from within public hospital data, and developing a regional description of primary care service capacity. A key enabler was the formal, multi-sectoral collaboration’s involvement throughout planning, data collection, analysis, and knowledge transfer and exchange phases. Deficiencies in general practice data software and a paucity of information on the refugee client experience of local services needed to be addressed.

Implications for policy and practice
Methodology based within formal multi-sectoral collaboration can help to overcome challenges, lead to tangible outcomes and result in enduring partnerships with stakeholders beyond the project. Population health planning involving migrants requires routine ‘country of birth’ data collection by all primary care services and an understanding of client service experiences.

Dr I-Hao Cheng is an early career research fellow focused on improving the care of refugees in general practice. He is based at the Southern Academic Primary Care Research Unit (Monash University, Dandenong Casey General Practice Association, Southern Health).

Are whiplash guidelines useful for GPs in north Queensland?

Tracy Cheffins1, Margaret Spillman1
1School of Medicine and Dentistry, James Cook University

Aims and rationale
The study examined how general practitioners assess and manage whiplash injury, and sought feedback from GPs about the usefulness of a clinical guideline developed for GPs.

Methods
General practices affiliated with the North Queensland Practice Based Research Network were recruited. With agreement from the principal GP, a clinical audit of the practice’s whiplash patients from the preceding 12 months was undertaken by the practice nurse. De-identified clinical audit data were analysed by the research team.

Semi-structured interviews were done with GPs working at the practice. The interviews were repeated three months following dissemination of the audit results and the Motor Accident Authority (MAA) guidelines, to evaluate GPs’ uptake and opinion of the guidelines.

Findings
There was a 40% practice response rate. The majority of whiplash injuries audited were sustained in a motor accident (84.4%) and half had neck mobility recorded. Half were referred for a cervical spine x-ray and nearly half referred to a physiotherapist. Only one GP was aware of specific guidelines. In the second interview nearly all GPs recalled the guidelines sufficiently to comment even though only three had seen a whiplash case recently. Overall GPs rated the guidelines useful, very useful or extremely useful (82.3%). There was close alignment between the GPs self-reported practice and best practice. GPs were prepared to use the MAA whiplash guidelines and stated that the guideline’s management algorithm was the most useful aspect (34.8%).

Implications for policy and practice
Authors of guidelines should utilise pro-active methods of dissemination including practice audit and interactive discussion of the guidelines. This could be achieved through the development of RACGP Level 1 continuing professional development modules.

Dr Tracy Cheffins was the medical coordinator of the North Queensland Practice Based Research Network from 2007 to 2011. In 2011 she was the recipient of an RACGP-CONROD research grant to study use of whiplash guidelines by general practitioners. She now works for the Townsville-Mackay Medicare Local.
Results of the ankle brachial index determination by oscillometric method in general practice study (ABIDING)

Mark Nelson¹, Stephen Quinn², Tania Winzenberg¹, Faline Howes³, Louise Shiel¹, Cristopher Reid³
¹Menzies Research Institute of Tasmania, University of Tasmania, ²Flinders University, ³Monash University

Aims and rationale
Ankle-Brachial Index (ABI) is rarely done in primary care due to the need for specialised equipment and training. Nearly 20,000 oscillometric devices were distributed by the HBPRCA to GPs. ABIDING sought to determine the agreement between ABI measured by conventional and pragmatic methods, and to ascertain the utility of the latter for the diagnosis of peripheral arterial disease (PAD) in primary care.

Methods
Cross-sectional validation and diagnostic accuracy study in metropolitan and rural Victorian general practice, conducted between October 2009 and November 2010 of 250 persons with cardiovascular disease or high risk of said. ABIs were done by a research nurse using a mercury sphygmomanometer and Doppler and a practice nurse using an oscillometric device. Descriptive analyses were used to investigate the agreement between the two procedures. Correlations between the paired readings were also calculated. The diagnostic accuracy was evaluated using ROC analysis and quantified as the C statistic. We also examined likelihood ratios.

Findings
Multivariable C statistic for the pragmatic ABI method diagnostic performance for PAD diagnosis in comparison to the conventional method gave a was sensitivity of 53% (95% CI 35–70%), specificity 97% (93–99%), positive predictive value 75% (53–90%) and negative predictive value 92% (88–95%). The positive likelihood ratio was 17.3 and the negative 0.49. The C statistic of diagnosis of PAD was 0.88 (0.87).

Implications for policy and practice
Oscillometric ABI measures by primary care nurses lacked sufficient agreement with conventional measures to be recommended for routine use.

Implementing e-health innovations in chronic disease management

Shiva Vasi¹, Jennifer Advocat¹, Joanne Enticott¹, Jennifer Newton¹, Grant Russell¹
¹Monash University

Aim and rationale
Information technology interventions have been seen as overcoming some of the administrative challenges as primary care providers confront the complex challenges of chronic disease management. cdmNet is a web based tool designed to help primary care practitioners optimise systematic care of patients with chronic disease.

This observational study was designed to understand 1) how primary care practices incorporate the use of the cdmNet software into their routines of managing chronic disease and 2) how the software influences communication within and across organisational boundaries?

Methods
Qualitative methods, based on ethnography and framed within the Chronic Care Model and theories of organisational routines. A researcher visited four moderate sized general practices. She intensively observed practice activities, provider-patient interactions, compiled a practice site profile and conducted in-depth interviews with patients, practice members and allied health providers. Analysis generated case studies using a constant comparative approach.

Findings
The organisational context is fundamental to the successful implementation of cdmNet. Practices only incorporate cdmNet in their chronic disease care routines when it is part of a more comprehensive change in focus of clinical care with reconfiguration of the practice team and development of network affiliations. At the provider level adoption was sensitive to provider values, philosophy of care, and attitudes to innovation.

Implications for policy and practice
The findings of this study will challenge the view of e-health as ‘plug-in’ technologies, and shed light on complexities of implementing e-health in primary care.

Professor Mark Nelson is Chair, Discipline of General Practice, University of Tasmania and Senior Member, Menzies Research Institute Tasmania. He is also in general practice in Hobart. His research interests are around large-scale clinical trials in CVD prevention in primary care.

Dr Shiva Vasi is a researcher at Southern Academic Primary Care Research Unit (Monash University). Her current research is in the area of innovative use of technology in chronic disease management and refugees in primary health care.
Next-generation data opportunities supporting Medicare Local objectives

Douglas Boyle

University of Melbourne Faculty of Medicine Rural Health Academic Centre

Aims and rationale

Since 2006, the University of Melbourne has been researching tools to support record-linked audit, surveillance and research across organisational boundaries—including general practice, allied health care, hospital, laboratory and pharmacy domains. Previously almost all audit and research involving general practice has utilised aggregated and de-identified data. The rationale has been to allow policy makers, implementers and researchers to investigate any type of patient interaction across any domain by resolving the privacy and technical issues involved.

Methods

To meet the challenges of providing data across organisational domains, many issues must be addressed—all must be resolved. Failure to address any one issue is a failure to provide a complete solution. Issues that were identified and resolved by the university are: legal compliance, patient consent (waiver, opt-in and opt-out processes), support for almost any database (BP, Communicare, GENIE, MD2/MD3, MedTech32, Practix, Zedmed, Pharmacy, Labs, MS-Access...), security, privacy-protecting record linkage, supportability, specific study/project protocol support. The University of Melbourne has developed the GRHANITE™ system that addresses each of these concerns providing a complete data acquisition solution.

Findings

There are now three universities, over 120 GP surgeries, family planning clinics, AMSs and laboratories utilising GRHANITE™ and GRHANITE™ record linkage as part of major NHMRC and DoHA initiatives with another 100 installations planned by June 2012.

Implications for policy and practice

As Medicare Locals develop, GRHANITE™ has the capacity to support them in planning, implementation, coordination and clinical outcome monitoring including ‘too-hard-box’ areas such as doctor shopping, drug concordance and journey of care tracking.

23 Preventive health 2

The development of an intervention to equitably implement guidelines for the prevention and early detection of vascular disease in general practice

Mark Harris, Yordanka Krastev, John Litt, Grant Russell, Danielle Mazza, Chris Del Mar, Jane Smith, Meike Van Driel, Richard Taylor, Jane Lloyd

Centre for Primary Health Care and Equity UNSW, Department of General Practice, Adelaide University, School of Primary Health Care, Monash University, School of Medicine, Bond University, Department of General Practice, University of Queensland, School of Public Health and Community Medicine, UNSW

Aims and rationale

Best practice guidelines to prevent vascular disease have been developed by the NHMRC, National Heart Foundation and Vascular Alliance and the RACGP. Although widely disseminated, their implementation in general practice is incomplete. This presentation describes the findings from a multi-method study to develop an implementation strategy for Australian general practice.

Methods

• Narrative reviews of the literature on theoretical frameworks and interventions to improve preventive practice in PHC including strategies for disadvantaged populations.
• A mixed method qualitative study in 8 practices involving audit and semi structured interviews with GPs, practice nurses and managers and their patients.
• A synthesis workshop involving key stakeholders reflecting on these findings, current strategies and opportunities.
• Piloting and qualitative case study in three practices

Findings

The findings were synthesised to develop an intervention model based on five key components:

• Synthesis and summary of the guideline recommendations using the 5As framework (Assess, Advise, Agree, Assist, Arrange).
• Training focused on assessment, brief advice and goal setting, using standardised patients.
• Clinical audit using an electronic extraction tool supplemented by population data.
• Facilitated practice meetings (3) to discuss the audit findings and identify priorities for action.
• Links between the practice and referral and community resources

Implications for policy and practice

Passive implementation of guidelines is ineffective. This study describes a methodology to develop and equitably implement strategies for disease prevention in Australian general practice.

Mark Harris is Professor of General Practice and Executive Director of the Centre for Primary Health Care and Equity at UNSW, a volunteer GP with the Asylum Seekers Centre in Sydney and holds a NHMRC Senior Professorial Research Fellowship 2011–2015.
Using a patient self-assessment form to meet the needs of the carers of people with advanced cancer through general practice: a randomised controlled trial

Geoffrey Mitchell1, Afaf Girgis2, Moyez Jiwa3, David Sibbritt

1University of Queensland, 2University of New South Wales, 3Curtin University, 4Newcastle University

Aims and rationale
Aim: to present the results of a trial of a novel general practitioner (GP)-based carer needs assessment checklist.

Rationale: Carer wellbeing underpins home-based care of patients with advanced cancer. Care for carers is achievable in primary care, through systematic needs evaluation.

Methods
A comprehensive literature review and qualitative interviews informed the development of a Needs Assessment Tool for Carers (NAT-C) and complementary GP Toolkit of resources.

We recruited carers through oncology and palliative care services. Intervention carers consulted their GP with the NAT-C at baseline and three months, versus usual care. All participants were surveyed by phone four times in six months, using validated measures of needs, anxiety, depression, coping styles and quality of life.

Findings
We recruited 392 carers. Intervention participants had no reduction in the number or intensity of needs compared with controls. There were some reductions in psychological and social needs in people for carers with pre-existing depression or anxiety. Physical wellbeing increased for those with no pre-existing anxiety. Intervention carers of patients with moderately reduced function had fewer needs for health services and fewer total needs, while intervention carers caring for severely ill people had more psychological and physical needs than control carers. The NAT-C may have triggered comprehension of the physical and psychological burden of caring for a very ill person.

Implications for policy and practice
Carers are integral to Australian health care, and this project offers a means of identifying and addressing their needs. Similar approaches could be developed for carers of other groups with long-term or intense needs, like dementia.

Does GP prescribing of anti-hypertensive and lipid-lowering medications change when cardiovascular absolute risk assessment is utilised?

Sanjyot Vagholkar1,2, Nicholas Zwar2, Mark Harris3, Elizabeth Denney-Wilson4

1General Practice Unit, South Western Sydney Local Health District, 2School of Public Health and Community Medicine, University of New South Wales, 3Centre for Primary Health Care and Equity, University of New South Wales, 4Faculty of Nursing, Midwifery and Health, University of Technology

Aims and rationale
Australian guidelines for the management of hypertension and lipids recommend using cardiovascular absolute risk assessment (ARA) to guide treatment. Use of ARA in Australian general practice is not however routine. The aim of this trial, conducted in 2008–10, was to test the impact of using ARA on management of cardiovascular risk, including prescription of anti-hypertensive and lipid-lowering medication.

Methods
Cluster randomised controlled trial conducted in urban general practice. The intervention involved GPs conducting a cardiovascular ARA of patients aged 45–69 years and then managing their risk. Data was collected by patient questionnaire and medical record audit pre and twelve months post-intervention. Analysis was conducted comparing control and intervention groups at baseline and 12 months. Medication data was subject to multi-level logistic regression analysis to explore factors associated with intensification and reduction of anti-hypertensive and lipid-lowering therapy.

Findings
The study involved 36 GPs and 1074 patients. The majority of patients were at low risk of cardiovascular disease. At baseline about a third of patients were already on anti-hypertensive or lipid-lowering medication. There were no significant differences between groups at 12 months. Treatment to BP and lipid targets predicted intensification and reduction of therapy while absolute risk level did not.

Implications for policy and practice
Use of ARA did not significantly impact on GP prescribing of anti-hypertensive and lipid-lowering medication. The findings suggest the traditional approach of single risk factor management is still dominant when managing cardiovascular risk factors.

Dr Sanjyot Vagholkar is Staff Specialist in the GP Unit at Fairfield Hospital in Sydney and Conjoint Senior Lecturer with the University of New South Wales. She is a practising GP and is currently completing a PhD exploring the impact of cardiovascular absolute risk assessment on prescribing.
Statin prescribing in Australian and Irish general practice: a qualitative study

Brett Montgomery¹, Jon Emery¹
¹General Practice, SPARHC, University of Western Australia

Aims and rationale
Statins are widely prescribed in general practice, but optimal prescribing seems elusive and controversial. In this study, we aimed to explore general practitioner (GP) decision-making about the prescribing of statins, and factors influencing this decision-making.

Methods
Semi-structured interviews were performed with 19 GPs in Australia and Ireland. Data were analysed using qualitative methods including thematic analysis.

Findings
Statin prescribing was a common and sometimes challenging issue for GPs in both countries. Statin prescribing decision-making was individualised to different patients based on many factors, including notions of individual cardiovascular risk, patient ideas, values and behaviours. Influences on GP knowledge about statins were diverse; generally, social and experiential factors seemed more important than written or formal educational sources. GP contact with the primary evidence base was indirect, being filtered through a number of secondary interpretive channels. Challenges in statin prescribing were often characterised by tensions between various competing factors, such as discordant doctor-patient views on management, or the balance of risks and harms. Models were developed which summarise these findings.

Implications for policy and practice
The role of statins in high risk patients is well understood by GPs, but there are many areas of uncertainty such as prescribing at extremes of age, methods of risk assessment and lipid target levels. These are appropriate areas for future research and debate. Different research designs will be needed to explore evidence-practice gaps. Future interventions to improve prescribing may need to be complex in design, involving social and practice system components.

Brett Montgomery is a general practitioner who divides his time between clinical work, teaching work and research. His research has largely focused on issues of cardiovascular disease prevention in general practice.

What instruments are accepted by the general practice team for measuring physical activity?

Shona Dutton¹, Sarah Dennis¹, Mark Harris¹, Nick Zwar¹, Hidde Van Der Ploeg², Adrian Bauman²
¹University of NSW, Centre for Primary Health Care and Equity, ²University of Sydney, School of Public Health

Aims and rationale
Regular physical activity (PA) is a powerful means of preventing chronic diseases. General practice has an important role in improving population levels of PA. A number of tools have been developed for GPs and practice nurses to use to assess the PA in patients.

The aims of this study were to identify:

- What PA assessment instruments do GPs and practice nurses prefer?
- Why do GPs and practice nurses prefer these instruments?

Methods
Semi-structured interviews were conducted with nine GPs and ten practice nurses from the Sutherland Division of General Practice to determine preferences from five PA assessment instruments. Two instruments were identified and then used by health professionals to assess patients in the study. A sample of health professionals was then selected for semi-structured interviews to determine opinions of the instruments.

Findings
This study found 88% GPs, 100% nurses preferred the General Practice Physical Activity Questionnaire. Reasons for preference were influenced by the specific characteristics of the instrument (100%), types of patients and type of consultation (84.2%).

Instrument comprehensiveness also ranked highly (100%). Almost half (42%), highlighted that the briefer the instrument the harder for them to interpret questions and/or administer to patients.

Implications for policy and practice
This study highlights important considerations for researchers regarding the design and implementation of PA assessment. Previous research has focused on time barriers however, this study highlights that maintaining comprehensiveness and simplicity are equally important.

Shona Dutton is an Exercise Physiologist and PhD student with the University of NSW, Centre for Primary Health Care and Equity focusing on uptake of physical activity assessment/measurement in primary care.
Knowledge exchange 2

Investigating symptoms of lung cancer—an evidence-based guide for general practitioners

Danielle Mazza1, Samantha Chakraborty1, Kay Jones1, Ian Olver2, Helen Zorbas3
1Department of General Practice, Monash University, 2Cancer Council, 3Cancer Australia

Aims and rationale
Lung cancer is the leading cause of cancer deaths in Australia. Late detection and extended delays in referral contribute to high mortality rates. Consequently, the Australian Government agency, Cancer Australia, sought to develop guidance for general practitioners about the early investigation and referral of lung cancer.

Aims: To develop a guide for general practitioners on the effective investigation and referral of people who have or may have lung cancer.

Methods
An evidence-based guide was developed using the processes detailed in the ADAPTE framework for guideline adaptation (Version 2.0).

Findings
A search of the literature identified 75 potentially relevant guidelines, of these 13 guidelines were assessed using the AGREE instrument and a shortlist of three international guidelines (UK, NZGG and USA) were selected to inform this guide. Recommendations in the guide focus on three key topics: the symptoms or combinations of symptoms that are likely to indicate lung cancer, the effectiveness of diagnostic and staging investigations in patients with suspected lung cancer and effective follow up of suspected lung cancer through multidisciplinary referral pathways.

Implications for policy and practice
A new evidence-based guide has been crafted to assist general practitioners assess symptoms and undertake first-line investigations for patients who have or may have lung cancer, and to support early and rapid referral into the cancer care pathway. While this guide targets general practitioners, a targeted implementation strategy is necessary to encourage uptake and use by health professionals and consumers.

Reflections on the use of ADAPTE to develop an evidence-based guide for GPs on the early detection and referral of lung cancer

Samantha Chakraborty1, Kay Jones1, Danielle Mazza1
1Department of General Practice, Monash University

Aims and rationale
The ADAPTE framework was established to enhance efficiency in guideline development and facilitate adaptation of high quality clinical practice guidelines for a local context. However the feasibility and usability of the process has not been widely evaluated.

Aims: To describe the experiences of using the ADAPTE framework as a resource to adapt existing guidelines on the investigation and early referral for lung cancer for Australian general practitioners.

Methods
At each step of the ADAPTE process, all contributors, including Expert Advisory Panel members, project Steering Group members and Project Team members, reflected on the processes outlined in the ADAPTE framework. These reflections were collated into a lessons learned log and analysed following completion of the guide development process.

Findings
The ADAPTE process provided useful structure and guidance however opportunities for improvement were noted in several steps in the process, in particular during the scope and purpose stage, the search and screen stage and the assessment stage. Issues of concern related to efficiency of the process, level of assumed knowledge and expertise and resource requirements.

Implications for policy and practice
The ADAPTE framework offers an attractive alternative to de novo guideline synthesis in circumstances where high quality, compatible guidelines already exist. Our project required modifications to the ADAPTE process to enhance its usability. Pending further evaluation, consideration should be given to including these modifications in updated versions of the ADAPTE framework.

Professor Danielle Mazza is an academic GP and author of the textbook ‘Women’s health in general practice’. Current research involves closing evidence practice gaps in preventive care, women’s sexual and reproductive health, cancer screening and guideline development and implementation.
Aims and rationale
Type 2 diabetes is a major public health problem. Prevention may be the most effective way to reduce the burden. There is consistently strong evidence from randomised controlled trials that type 2 diabetes can be prevented or delayed through lifestyle modification interventions that improve diet, increase physical activity and achieve weight loss in people at high risk of developing diabetes. The challenge is how to translate this evidence into community-based programs that reach those most likely to benefit.

Methods
We compared and contrasted three programs (a) the Commonwealth Lifestyle Modification Program to prevent type 2 diabetes (b) the Victorian program (Life! Taking Action on Diabetes –and (c) the Sydney Diabetes Prevention Program (SDDP) to identify barriers and enablers to the uptake of diabetes prevention programs in primary health care.

Findings
All programs found it challenging to screen and recruit participants. The Commonwealth program and SDPP recruited exclusively in the general practice setting with limited success. Whereas, Life! was successful in trialling additional strategies including social marketing, workplace screening and facilitator-led recruitment. Participants who completed programs achieved modest weight reductions and improved their nutrition profile, thereby reducing their diabetes risk.

Implications for policy and practice
Evidence-based diabetes prevention programs which target high-risk participants reduce the risk markers for diabetes. However, structural barriers exist that continue to make screening and recruitment difficult, particularly in those who may benefit the most. System changes are required in primary health care before the real benefits of diabetes prevention programs can be realised.

Philip Vita has a strong track record in public health and health policy development, implementation and evaluation and worked in both government and academic environments. For the last four year she has been the Director of the Sydney Diabetes Prevention Program, funded by the NSW Health Department.

The impact of choices on the outcome of meta-analysis: an analysis of decisions made in meta-analyses of depression screening and the risk of `hunch' bias: a case study

Mieke van Driel1, Felicity Goodyear-Smith7, Bruce Arroll2, Chris Del Mar7
1 Discipline of General Practice, School of Medicine, The University of Queensland, 2 Department of General Practice and Primary Health Care, University of Auckland, NZ, 3 Faculty of Health Sciences and Medicine, Bond University, Gold Coast, Queensland

Aims and rationale
Depression is common in primary care and screening is recommended. We found two meta-analysis with opposing recommendations regarding depression screening. We explore how meta-analyses with the same research question can be contradictory by exploring choices made by authors in such meta-analyses.

Methods
We identified five systematic reviews on depression screening conducted between 2001 and 2009 by two author groups. They consistently reached opposite conclusions. We analysed the two contemporaneous systematic reviews, applying a stepwise approach to unravel their methods. Decision points were identified, and discrepancies between systematic reviews authors’ justification of choices made recorded.

Findings
The five systematic reviews included 26 randomised controlled trials with different combinations in each review. For the outcome depression screening resulting in treatment, both reviews undertook meta-analyses of a group of studies, imperfectly overlapping: two in particular, pooled by only one of each review, influenced the direction of the recommendation in opposite directions. Justification for inclusion or exclusion of studies was difficult to understand.

Implications for policy and practice
Systematic reviews may be less objective than assumed. This has important implications for the translation of evidence into practice. One form of bias may be a strongly held prior belief (‘hunch’) leading to selection bias. We recommend authors declare any strongly held beliefs as a priori hypotheses before embarking on systematic reviews. This will assist critical analysis and interpretation of evidence and inform guidelines.

Professor Mieke van Driel is head of the Discipline of General Practice at the University of Queensland and works as a GP in an Aboriginal Medical Service. She is interested in the implementation of evidence in practice that encompasses all steps from generating evidence to applying it to patients.
Poor description of non-drug interventions: a remediable barrier to usage?

Paul Glasziou¹, Tammy Hoffmann¹, Chrissy Erueti¹
¹Bond University, Gold Coast

Aims and rationale
Poorly described treatments and interventions are one remediable barrier to the use of research in practice. In particular, non-drug interventions often appear to be poorly described and consequentially underused. We aimed to assess the frequency of inadequate descriptions, and identify which elements are missing.

Methods
The interventions of all randomised trials on non-drug interventions published in 6 major general medical journals (JAMA, BMJ, Lancet, NEJM, Annals of Internal Medicine, and PLoS Medicine) in 2009 were assessed with a standardised checklist by 2 reviewers independently using the primary paper and any references, appendices or websites provided.

Findings
We identified 134 trials evaluating 138 non-drug interventions, including devices (17%), education and training (15%), surgery (13%), mixed or complex (13%), diet (12%), and exercise (9%). Overall 53 of 138 interventions (38%) had sufficiently well described all necessary details of the intervention. Common missing elements were materials (missing in 51% of interventions), procedures within a session (46% missing), and the schedule of sessions (17% missing). For several articles necessary appendices were missing from the journal website; for others the detailed intervention was only published subsequent to the trial report, and hence was not referenced.

Implications for policy and practice
The majority of non-drug interventions are inadequately described in standard publications and therefore they cannot be implemented in practice. Readers, authors, editors, and funders need to better address the issue of intervention descriptions if research on non-drug interventions is not to be wasted.

Paul Glasziou FRACGP, PhD is an NHMRC Australia Fellow, Professor of Evidence-Based Medicine at Bond University, and a part-time general practitioner. His key interests include identifying and removing the barriers to using high-quality research in everyday clinical practice.
**Health systems and services 2**

**Utilisation of allied health services by people with chronic disease**

Michele Foster¹, Michele Haynes¹, Martin O’Flaherty¹, Geoffrey Mitchell², Elizabeth Skinner², Terry Haines²

¹University of Queensland, ²Monash University

**Aims and rationale**

With the global burden of disease, building the evidence base for the use of health services and what influences patterns of use, is of critical policy importance. The aim of this study was to examine patterns of use of allied health services among the Australian population and how use might differ among people with chronic disease and different types of health insurance.

**Methods**

Analyses of data from the National Health Survey (NHS) and Australian Longitudinal Study of Women’s Health (ALSWH) were used to examine differences in utilisation of allied health services among people with chronic disease to determine who is more likely to use these services and how this relates to important social and demographic factors and health insurance coverage.

**Findings**

Use of allied health services differs according to gender, but for women, also varies at different life stages. People with non-English speaking backgrounds are less likely to use allied health services. GP visits and health insurance are positively related to use of allied health services; although the effect of insurance is not straight-forward. Policy change appears to have some effect on increasing use of allied health services and this is most apparent for diabetes following introduction of the CDM items.

**Implications for policy and practice**

This study reveals the high and low users of allied health services and potential inequities in use. Strategies to improve the quality of longitudinal data and policy evidence base on use and effectiveness of allied health services is recommended.

---

**Mechanisms for successful workforce change: spotlight on allied health assistants working with older people in the community**

Susan Nancarrow¹, Anna Moran¹

¹Southern Cross University

**Aims and rationale**

The rapid growth of allied health assistants (AHAs) in Australia and the UK presents the opportunity to draw from successful workforce change models in the UK to inform implementation of these roles. The aim of this paper is to identify key mechanisms for successful workforce change through utilisation of AHAs This paper synthesises research findings from three UK and Australian projects examining workforce change in older people’s Community Based Rehabilitation Services (CBRS).

**Methods**

A synthesis of the findings from three workforce change projects was undertaken using thematic analysis and conceptual modelling. Findings from two comparable large scale UK projects examining workforce flexibility in older people’s CBRSs were synthesised alongside a smaller Australian project examining the implementation of AHA roles to community health settings and contextualised in the literature. Combined, these projects gathered data from over 400 staff, 30 teams and 8000 patients.

**Findings**

Successful workforce change requires consideration of a number of key mechanisms, including, but not limited to, inclusive stakeholder engagement in change processes; a supportive organisational culture; and opportunity for facilitated reflection around team/service process and the change process; ensuring new roles are focused on having maximum service impact and ensuring there is appropriate and considered matching client needs with the skills and competencies of all staff (assistants and qualified).

**Implications for policy and practice**

There is potential to optimise patient, service and staff outcomes with the utilisation of AHAs in older people’s CBRS when these key mechanisms are employed. These mechanisms can be incorporated into a number of existing workforce redesign tools and used to inform workforce change in other areas of health and social care.

---

A/Professor Michele Foster’s primary research interest is in the area of applied health policy and health services research, with an emphasis on policy implementation, professional decision making and patient experience relating to chronic disease management in primary health care.

Dr Anna Moran’s research includes examination of workforce dynamics in community rehabilitation settings in the UK and Australia. Her thesis examined the contribution assistants make to workforce dynamics and outcomes of care. Anna is currently examining assistant roles and the dynamics of workforce change for allied health practitioners in Australian health care settings.
The ‘who cares for me?’ study

Marjan Kljakovic
ANU Medical School/PracNet

Aims and rationale
Measurement of consultation output is challenging, particularly for a complex activity such as arranging a referral following a general practice consultation. Our study accepted the challenge and measured the level of agreement between which health services patients’ thought their GP might refer and the services that were actually offered.

Methods
A qualitative project undertaken in the waiting rooms of PracNet general practices where patients completed a brief pre-consultation questionnaire asking ‘Who do you think your doctor (GP) might advise you to see following your appointment today?’ Next they were asked to select those services they thought the GP would suggest from a Health Services List provided. Finally, patients were asked ‘Who do you personally think might be helpful to see following your appointment today?’ and again they selected as many of the services from the Health Services List that applied. At the completion of the consultation, GPs were asked to select from the Health Services List those services they had advised the patient to see following the consultation on that day. The Health Services List included five medical, four allied health, three community health and one self-help option.

Findings
Sixty-seven patients consulted with 10 GPs selected from PracNet—a Practice Based Research Network affiliated with the ANU Medical school. All patients consented to completing the pre-consultation questionnaire. Our study found no relationship between the services patients thought their GP might offer, the services patient thought they might need, and the services actually offered by the GP for the patient.

Implications for policy and practice
Effective referral requires agreement as to the purpose of the referral and our study discovered that agreement is an elusive goal in general practice. Policies are needed to help general practices reach acceptable levels of agreement as to the purpose of referral to health services outside the general practice.

An assessment of hospital specialist outpatient departments in Queensland using the clinical microsystem approach

Tina Janamian, Claire Jackson, Caroline Nicholson
University of Queensland, Mater Health Services

Aims and rationale
To gain a better understanding of the underlying issues related to the hospital specialist outpatient departments (SOPDs) long waiting times, to identify the barriers and enablers to referral processes, and to identify opportunities to improve the referral process and reduce hospital SOPD waiting times.

Methods
In-depth key informant interviews were conducted with relevant stakeholders and staff at four SOPDs in two Queensland hospitals. Interviews were guided by an open-ended questionnaire which incorporated items from the Clinical Microsystem Assessment Tool (MAT) (Nelson, Batalden et al. 2002). The key informant interviews were recorded, transcribed and analysed using inductive thematic analysis supported by NVivo 9 software following a rigorous process (Fereday and Muir-Cochrane 2006).

Findings
Forty-three interviews were conducted. Key informants identified leadership and cultural barriers, staffing and communication problems, inefficiencies in processes and patterns, a lack of adequate information and information technology (IT), and a number of external factors as contributing to the SOPD long waiting times. Key informants also suggested possible ways for improving different aspects of their SOPD.

Implications for policy and practice
The clinical microsystem approach offers a useful method for evaluating microsystems and gaining a deeper understanding of their functioning. The results can be used to assist the four SOPDs to proactively improve the functioning of their SOPD with a goal of adopting the characteristics of a high performing microsystem. The results provide a foundation for further development and improvement of outpatient services in Queensland.

Professor Marjan Kljakovic has over 30 years’ history of balancing academic work with clinical general practice. Marjan’s research focuses on the quality of general practice care; Exploring the gaps between ideal and actual care for asthma, allergy, injury, sore throat, mental disorders, and chronic disease.
26 Chronic disease management 2

A multi-centred approach to improving healthy lifestyles: evaluation of the metropolitan healthy lifestyle program

Jacqueline Davis¹, Michael Rosenberg²
¹Fremantle GP Network, ²University of Western Australia

Aims and rationale
The metropolitan healthy lifestyle program (MHLP) provides services and support for people at risk of developing chronic disease, and for those with chronic disease to make informed lifestyle choices and healthy behaviour change.

Methods
The main components of the evaluation were designed to measure the delivery and impact of MHLP. The primary evaluation elements involved data collected on participants at baseline, 3, 6 and at 12-months. A series of focus groups with patients, GPs, practice nurses and stakeholders were held throughout program implementation. Thirdly, a longitudinal case study series followed a small number of participants to monitor changes outside of the program.

Findings
Evaluation results (December 2011) monitored the progress of 4283 participants between June 2008 to November 2011. Overall, evidence collected suggests that for patients, who initiated and remained engaged with the program, positive healthy lifestyle changes were observed through improved health related attitudes and behaviour, and these were reflected in significant improvements in anthropometric and physiological indicators (eg MBI, BP, IGT).

Implications for policy and practice
The achievements of MHLP relate to the flexibility of its implementation and supports the idea that GP Networks/Medicare Locals are ideally placed to develop programs specific to their local needs while contributing to an overall coordinated program goal. MHLP has been refunded by WA Health for a further 3 years and expanded from four to six service delivery centres. An economic evaluation will measure the potential cost savings of the intervention during the next phase of implementation (to 2014).

Older patients’ attitudes to multidisciplinary care for chronic disease management in general practice

Andrew Bonney¹, Christopher Magee², Russell Pearson¹
¹Graduate School of Medicine University of Wollongong, ²School of Psychology University of Wollongong

Aims and rationale
The ageing population and increasing prevalence of chronic illness has contributed to the need for significant primary health care reform, including increased use of multidisciplinary care and task substitution. This cross-sectional study aims to address the paucity of Australian data concerning older patients’ preferences in order to inform the development of patient-centred models of multidisciplinary care.

Methods
Ten practices were randomly sampled from a combined RA1/RA2 region. Survey instruments were distributed to consecutive patients aged 60 years and over in each practice. Three models of care (doctor-led, nurse-led and team-based) were constructed from the instrument’s 5-point Likert scale attitude items with five items in each model. Aggregate model scores were analysed using the SPSS 17.0 General Linear Model procedure controlling for the clustered design.

Findings
The response rate was 53% (270 returned from 511 distributed) with 59% of respondents female; 78% with a chronic health problem; and 62% attending their current practice >/= five years. There was a significant difference in the mean scores for the nurse-led (3.42; SD 0.65) and doctor-led (4.02; SD 0.61) models (p<0.001); but no significant difference between the doctor-led and team-based (4.05; SD 0.66) models (p=0.46).

Implications for policy and practice
The team-based model combined clinical nursing roles and interpersonal continuity with the patient’s GP and was as acceptable to patients as the doctor-led model. Thus, interpersonal continuity appears important in designing reformed models of care. In addition, gains in practice productivity may be possible whilst maintaining patient satisfaction. Further research, with clinical trials of differing systems of care is required.

Professor Andrew Bonney is a GP and Roberta Williams Chair of General Practice at the Graduate School of Medicine, University of Wollongong. His research focus has been on inter-personal aspects of patient care, and their impact on behaviours and health care systems.
Cancer care coordinator: promoting multidisciplinary care—a pilot study in Australian general practice

Moyez Jiwa1, Deepa Sriram1, Jill Sherriff2, Kathy Briffa1, Toni Musiello2, Glenys Longman2
1Curtin Health Innovation Research Institute, Curtin University, 2University of Western Australia

Aims and rationale
We hypothesised that patients treated for breast cancer would benefit from targeted therapeutic action delivered by general practitioners on the recommendations of a multidisciplinary team based in primary care.

Methods
Patients scheduled for follow-up visits at a surgical clinic were invited to complete a self-administered care needs assessment and be interviewed by a breast care nurse. Members of a multidisciplinary team discussed the audio recorded interviews within two weeks. The team made recommendations for each patient, which were presented to the general practitioner as a suggested ‘care plan’. Health status information was collected via the short form 36, and anxiety and depression data via the hospital anxiety and depression scale, at recruitment and three months later.

Findings
Among the 74 women who were invited to participate, 21 were recruited over a 6-month period (28%), 19 completed the study (90%). The mean age was 55 years (range 38–61 years) and the mean time in follow up was 23 months (range 16–38 months). The team identified a median of three problems per patient (range 2–7) and made an average of two recommendations per patient for referral to an allied health professional (range 0–5). At 3 months, 17 women had attended their general practitioner, 11 of whom felt their condition had improved as a result of the intervention.

Implications for policy and practice
Primary care based multidisciplinary review of treated breast cancer patients is feasible and, for most, result in benefit.

A comprehensive PHC approach to chronic conditions

Angela Lawless1, Toby Freeman1, Gwyn Jolley1, Fran Baum1, Malcolm Battersby2, Pat Phillips1, Sara Javanparast1
1South Australian Community Health Research Unit, Flinders University, 2Flinders Human Behaviour and Health Research Unit, Flinders University, 3Diabetes Centre and Endocrinology, The Queen Elizabeth Hospital

Aims and rationale
As part of a larger NHMRC funded study examining models of comprehensive primary health care (CPHC) services in the Australian context we have developed program logic models (PLMs) of a primary health care system response to two conditions: diabetes and depression. The models embed PHC principles and detail evidence-based interventions over a continuum from treatment to health promotion. Whilst comprehensive interventions are most promising in terms of improving health outcomes and reducing inequities, traditional research methods are often inappropriate given the highly complex nature of such initiatives and the dynamic contexts in which they are implemented.

Methods
Based on the Southgate model of CPHC developed in an earlier stage of the research, specific models for diabetes and depression were developed drawing on the literature and expert knowledge. These models were then tested and refined through an interactive and collaborative process with PHC service workers involved in diabetes and depression initiatives.

Findings
This research demonstrates the utility of PLMs in describing and examining responses to chronic conditions. The collaborative research methods engaged experts, staff and clients of the services in developing the PLM, helping to ensure the findings are current and relevant for stakeholders. PLMs are a useful mechanism for designing comprehensive, theory-driven evaluations of health services’ efforts across this continuum.

Implications for policy and practice
Combining logic modelling and theory based evaluation appears to be a promising method to describe and examine comprehensive interventions that have multiple goals and activities and take place in complex and dynamic contexts.

Professor Moyez Jiwa is a general practitioner and the Inaugural Chair of Health Innovation at the Curtin Health Innovation Research Institute, Western Australia.

Dr Angela Lawless joined the South Australian Community Health Research Unit, Flinders University in 2004 and is currently Deputy Director. Angela has extensive experience in evaluation of community and primary health care projects and services.
27 Children and young people's health

Social exclusion, deprivation and child health: a spatial analysis of ambulatory care sensitive conditions in children in Victoria, Australia, 2003–04 to 2008–09

Danielle Butler1, Linc Thurecht2, Laurie Brown2, Kirsty Douglas3
1Australian Primary Health Care Research Institute, 2National Centre for Economic and Social Modelling, 3ANU Medical School

Aims and rationale
Australia’s health reform has focused on access and equity and the role of primary health care in addressing this. The National Centre for Social and Economic Modelling has undertaken significant work in developing a small area index of child wellbeing and social exclusion (CSE). The Australian Primary Health Care Research Institute developed a composite score of deprivation (CSD) which includes measures of socioeconomic disadvantage, medical workforce and remoteness.

In this study we compare the two indices and their relationship to child health outcomes.

Methods

Design: The relationship between the indices and with child health outcomes was examined through bivariate analysis and visually through a series of maps.

Analysis conducted at the Local Government Area.

Findings
For 53.8% of the 0–4 year old population, both indices assigned the same quintile of disadvantage. Both indices detected significantly positive gradients for total and dental ACSC. The CSD also detects gradients in other health outcomes such as asthma and ENT.

Implications for policy and practice
Both indices capture important social gradients in child health conditions. However, including other measures of access, such as remoteness and workforce supply detects additional small area variation in child health outcomes. This has important implications for primary health care policy and for the planning of services.

Build it and they will come? Policy implications of youth health training for primary care

Carmen Jarrett1, Ann Dadich2, Fiona Robards1, David Bennett1
1NSW Centre for the Advancement of Adolescent Health, The Children's Hospital at, 2Centre for Innovation and Industry Studies, University of Western Sydney

Aims and rationale
To identify policy requirements to implement and sustain GP training in youth health

Methods
Drawing on Hall et al’s framework (1975) for policy agenda setting—that policy requires legitimacy, feasibility and support—we examine current policy and findings from a recent GP training initiative and reveal policy requirements.

Findings
Legitimacy of youth health as an area in which to intervene has been built in recent years. The principal of early intervention is also increasingly accepted (eg Medlow et al, 2010).

Evidence for feasibility for intervention in the youth life stage for mental and physical health in general is developing (eg Catania et al, 2012), and there is specific evidence that training GPs in youth health issues is effective (Sanci et al, 2000).

However, support for training GPs in youth health is constrained by individual, organisational and systemic factors (Jarrett et al, 2011); GPs themselves have proved reluctant to attend training, and youth health training competes with other higher priorities within organisations that provide GP training. Furthermore, there is no organisation that leads the provision of youth health training in the primary care sector.

Implications for policy and practice
This analysis points to the need to build supportive policy in order to successfully implement training in youth health within the primary care sector. This is likely to involve initiatives that: build workforce capacity; foster leadership; facilitate cross-sectoral networks; and contribute to the evidence base for what works.

Carmen Jarrett has a doctorate in Health Sciences and extensive experience as a clinician. She conducts needs assessments and evaluations of projects for the NSW Centre for the Advancement of Adolescent Health, which includes considering how services perceive working with young people.
Parents’ decision making and access to preventive health care for young children: what Andersen’s Model tells us

Karyn Alexander1, Bianca Brijnath1, Danielle Mazza1
1Monash University

Aims and rationale
There is low utilisation of preventive health care for children in Australian general practice. Reasons for this are unknown. Applying Andersen’s Behavioural Model, a popular model used to understand the determinants of health service utilisation, we aimed to investigate how parents access preventive health care services for their children.

Methods
Twenty-eight semi-structured interviews were undertaken in Melbourne between May and July 2011. Parents of children aged between 3–5 years were recruited from three socioeconomically diverse community settings. We examined how environmental factors, population characteristics and individual health behaviours influenced access to preventive health. Data were thematically analysed using Andersen’s Model.

Findings
Access to preventive health care for young children was relatively equitable in the sample. However, outside of immunisation, GPs are not seen as major providers of preventive services. Mapping data to Andersen’s Model shows that access is influenced by characteristics of the family, health practices at home, parents’ engagement with health services, and costs associated with preventive health care. Birth order of the child is a major determinant of access.

Implications for policy and practice
There is a complex matrix which underlies access to preventive health care for young children. Access needs to be understood within a systems framework, and to increase service utilisation the different components need to work together. Questions remain about which aspects of the system need more weighting and priority. These will be addressed in the next phase of this study.

Dr Karyn Alexander is a practicing GP and PhD student studying barriers to the uptake of preventive health care for young children. This aims to inform the development of an intervention aimed at increasing its delivery from general practice.

Working while breastfeeding: health implications of best-practice strategies for breastfeeding support in workplace settings

Julie Smith1, Ellen McIntyre2, Sarah Javanparast2, Kate Mortensen3, Lyn Craig4, Dorothy Broom1, Lyndall Strazdyns1
1Australian National University, 2Flinders University, 3Australian Breastfeeding Association, 4University of New South Wales

Aims and rationale
Around 40% of new mothers in Australia return to work within 12 months. Employment is associated with reduced breastfeeding, though appropriate workplace support may improve breastfeeding success.

We aimed to identify effective workplace accommodations for breastfeeding mothers in employment, and to ascertain whether successful breastfeeding benefited employers or mothers through improved maternal-child health.

Methods
The study sample comprised 304 employees who were employed in the first 12 months post-natally; 92 of whom returned to work before 6 months. Employees were recruited through 60 companies participating in a survey on ‘work and family’ related issues. Chi-square tests of independence were used to explore the relationship between a range of ‘family friendly’ workplace factors, and breastfeeding status at 6 months. We also compared health and leave outcomes for mother and infant, by breastfeeding status for those returning to work before 6 months.

Findings
Workplace accommodations specific to breastfeeding, such as lactation breaks and control over start and finish times, were linked to improved breastfeeding outcomes for those returning before 6 months. Among those returning before 6 months, work days lost caring for a sick infant were less among those who breastfed exclusively to 6 months.

Implications for policy and practice
Lack of workplace accommodation of the physical needs of lactating women may lead to breast engorgement, milk supply problems, and premature weaning. Physician endorsement of appropriate accommodations may help mothers balance breastfeeding and health goals, with pressures for early return to employment.

Ellen McIntyre is the Director of PHC RIS at Flinders University where she leads applied research to enhance the sharing of knowledge and information among researchers, policy makers and practitioners. In addition, she is currently researching ways to improve breastfeeding support for working mothers.
28 Primary care practitioners

Diabetic retinopathy screening and monitoring in general practice: preliminary results from an open controlled trial

Lisa Crossland1, Claire Jackson1, Stephen Begg2, Deborah Askew1, Peter Cranstoun1, Mark Dal Pra3, William Glasson6

1The University of Queensland, 2Queensland Health, 3Inala Primary Care, 4Strathpine Specialist Centre, 5Mount Gravatt Specialist Practice, 6Terrace Eye Centre

Aims and rationale
This NHMRC partnership grant funds a study to trial diabetic retinopathy (DR) screening and monitoring in general practice. The key aims are to test the accuracy, acceptability and cost-effectiveness of general practice based DR screening integrated into the diabetes annual cycle of care compared to conventional methods of DR screening with ophthalmic support.

Methods
The study is an open controlled trial involving 14 general practices (7 in each arm), 3 ophthalmologists and approximately 200 patients per practice. Intervention practices (conducting DR screening and monitoring) and will be compared with the control practices (continuing routine process of care). Intervention practices have been provided with retinal cameras and complete all photography and screening on site, with support from a distant ophthalmologist.

Findings
Study has been under way for 12 months with intervention practices in metropolitan and rural remote locations across Queensland. To date, 502 eyes (251 patients) have been reviewed. Of these, GPs identified 61 eyes (12%) with mild to moderate DR. Sixty-five (65) patients displayed other pathology including macular degeneration.

Staff members (clinical and non-clinical, nominated by the practice) are trained in retinal photography. The quality of the photographic images improved from 65% to 80% during the 3 months and continues to improve.

Implications for policy and practice
Preliminary data suggest that DR screening can be embedded into normal general practice with support from distant ophthalmologists and improve patient access to DR screening.

Polypharmacy and adverse drug events in Australia general practice patients aged 50 years or more

Graeme Miller1, Lisa Valenti1, Clare Bayram1

1Family Medicine Research Centre, University of Sydney

Aims and rationale
To investigate the prevalence of polypharmacy in general practice patients and to quantify the relationship between polypharmacy and adverse drug events.

Methods
Identification of patterns of polypharmacy in GP patients, frequency of ADEs in patients on multiple drugs, their type and severity, in three SAND sub-studies of BEACH (February 2011 to March 2012). Sample approximately 9,000 patients from 300 GPs.

Findings
In the first of three SAND blocks, GPs reported that 1,492 patients aged 50 or more took a total of 6,506 routine medications at an average of 4.4 medications per patient. The range of medications per patient varied from zero for 13.7% of patients to one patient on 24 medications. Of 6,057 medications 32.2% were cardiovascular drugs and 18.1% were related to the digestive system. Of 1,377 respondents, 130 (9.4%) had experienced an adverse drug event in the previous six months. Of the drugs listed as causative agents, cardiovascular and nervous system drugs each accounted for about one third of medications reported as causing adverse events. Almost half (44.0%) of patients were rated as having a ‘mild’ event, with another 46.4% rated as ‘moderate’, and 9.6% as severe. Data from all three SAND blocks will be reported at the conference.

Implications for policy and practice
This study demonstrates the high level of polypharmacy in older patients attending general practice. These patients carry an increased risk of iatrogenic morbidity from adverse drug effects. Improved medication management is vital to mitigating this risk.

A/Professor Graeme Miller is an Associate Professor and Medical Director of the Family Medicine Research Centre at the University of Sydney.
**Doctor shopping or patient sharing or none of the above?**

Siaw-Teng Liaw, Jane Taggart, Sarah Dennis, Bin Jalaludin, Elizabeth Comino, Mark Harris

1 UNSW School of Public Health and Community Medicine, 2 UNSW Centre for Primary Health Care and Equity, 3 SW Sydney Local Health District

**Aims and rationale**
Continuity of care, a central tenet of general practice, includes informational, management and personal dimensions; these are also inherent concepts in integrated care. Benefits include timely information exchange, improved work efficiency, avoiding repetitive work, structured clinical follow-up, case management, a multidisciplinary health team, multidisciplinary clinical pathways and professional collegiality. But how real is continuity of care in Australia, where practice lists are not available? We used extracted data in the UNSW electronic Practice Based Research Network (ePBRN) in SW Sydney to examine use of GP services by patients in an outer-metropolitan region.

**Methods**
We used data from four general practices in SW Sydney (Postcodes 2164, 2171, 2176, 2570), which were 5 to 40 km apart. Probabilistic matching was used to detect patients with the same set of identifiers within each practice ('duplicates') and across the four practices ('shared patients').

**Findings**
Of an aggregated total 74,661 patients, 2,970 (3.8%, range 0.7–13.3%) were shared among the four practices, while 1,247 (1.7%, range 0.5–4.1%) were recorded more than once within the practice. Not surprisingly, the extent of sharing by practice varied with distance apart. The practice that used a non-current software had the most ‘double counting’ (4%).

**Implications for policy and practice**
ePBRNs are essential research infrastructure to enable the accurate examination of the nature of and trends in health service utilisation in general practice and primary care. This will inform and influence primary care organisations to improve policy and practice in access to, equity and continuity of care.

---

**Provision of after-hours care by Australian general practitioners**

Alison Gee, Ian McRae

1 The Australian National University

**Aims and rationale**
The Australian health system has seen major changes in recent years to after-hours care arrangements, including extended after-hours incentive payments for general practitioners (GPs). Policy development in this area remains of high importance as the Australian Government moves towards a system whereby the newly established Medicare Locals will be funded to support after-hours services. This study aims to further inform this policy discussion and examine the provision of after-hours services by general practitioners within primary care.

**Methods**
This study analyses data from Wave 1 of the Medicine in Australia: Balancing Employment and Life (MABEL) 2008 study, which provides responses from 10, 498 Australian doctors engaged in clinical practice.

**Findings**
Findings provide information about the provision of after-hours care in Australian general practice. Specifically, findings will identify the characteristics of GPs that are related to their decisions to provide (or not provide) after-hours care as well as the relationship of after-hours service provision in deputising services, after-hours clinics and other primary care environments to GP job satisfaction and other issues relevant to work-life balance.

**Implications for policy and practice**
Results reveal a profile of general practitioners providing after-hours care in Australia and identify issues around work and personal environments associated with engagement in after-hours service. These results deepen understanding of existing GP behaviours and can inform policy development for the adequate provision of after-hours care to meet the needs of GPs and Australian health service users.

---

Dr Alison Gee (BPsych, PhD Clinical Psychology) is a psychologist with a research background in methods to overcome stigma and promote cooperative relations in mental health. As Research Fellow at APHCRI, her current work explores issues relating to Australian general practice.
29 Self-management 2

Educational intervention for older people with asthma: a randomised control trial

Dianne Goeman¹, Christine Jenkins², Melanie Crane³, Jo Douglass⁴
¹Helen Macpherson Smith Institute RDNS, Monash University, ²Woolcock Institute of Medical Research, Sydney University, ³Cooperative Research Centre for Asthma and Airways, ⁴The Royal Melbourne, Monash University

Aims and rationale
Between 2005 and 2008, 77% of asthma deaths occurred in those over 60 years of age. With the increase in the proportion of older people in the community projected to continue this burden will rise. Evidence-based guidelines are poorly implemented and structural barriers to the delivery of care have been identified. GPs are poorly placed in both time and resources to deliver necessary asthma education.

Methods
We undertook a single-blind, parallel design, randomised-control trial of an intervention comparing patient-centred education including device technique utilising the PACT versus usual care and written information-only education. One hundred and twenty people over 55 years of age were randomly assigned, by computer-generated stratification based on age and preventer medication ownership. The primary outcome measure was asthma control and the second primary outcome was adherence to preventer medication. Secondary outcome measures were asthma related quality of life, asthma exacerbations measured by β² agonist and oral corticosteroid use and written action plan ownership. Outcome measures were assessed at baseline and again at 3 and 12 months post intervention.

Findings
The intervention group participants experienced improvements in asthma control, adherence to asthma preventer medication, reduced exacerbations, improved quality of life and an increase in asthma action plan ownership at 3 and 12 months.

Implications for policy and practice
Asthma outcomes in older people can be significantly improved by specialist asthma educators delivering tailored education using the PACT to identify specific patient concerns and any unmet needs.

Multidisciplinary weight loss clinic in general practice

Tri Tuyen Cao¹, Garry Egger²
¹Montague Farm Medical Centre, ²Centre for Health Promotion and Research, Sydney

Background
The prevalence and degree of obesity is increasing in Australia. A multidisciplinary weight clinic in general practice (GP) can offer customised individual programs to suit each patient’s profile, to assist patients lose weight.

Aims
To develop and test a multidisciplinary approach to a GP weight clinic to achieve weight loss and to improve chronic disease status.

Method
A seven-week weight clinic program for 24 patients was conducted in one general practice by a team comprising a GP, practice nurse and allied health professionals (lifestyle adviser, dietitian, and psychologist). As part of the program, patients were motivated to establish healthy habits, identify key weight forming behaviours, and monitor their eating and physical activity behaviours through the use of a range of techniques. The program included weekly testing, measurement and group instruction. Weekly updates were carried out with the GP. Compliance was increased by clinic reminder and motivational text messages between meetings.

Results
From baseline to the end of the seven-week intervention, mean weight reduced from 94.4 kg to 92.0 kg, mean estimated body fat reduced from 39.2 kg to 37.1 kg, and mean waist circumference reduced from 108 cm to 102 cm. Significant improvements in HbA1c and liver function test were also recorded.

Conclusion
An innovative multidisciplinary weight loss clinic in our general practice can result in successful fat loss and improved chronic disease status amongst overweight patients. The longer term efficacy and generalisability of this approach need to be established.

Dr Tri Tuyen Cao presents her work on a multidisciplinary weight clinic and shares the tricks and traps in weight management in general practice. Her clinic, Montague Farm Medical Centre is the current RACGP South Australia Practice of the year 2011.
Utilisation of health services for type 2 diabetes management and adherence to the recommended standard diabetes care

Lal Rawal1, Catherine Joyce1, Rory Wolfe1, Michaela Riddell1, Brian Oldenburg1
1School of Public Health and Preventive Medicine, Monash University, Melbourne, 2School of Public Health and Preventive Medicine, Monash University, Melbourne, 3School of Public Health and Preventive Medicine, Monash University, Melbourne, 4School of Public Health and Preventive Medicine, Monash University, Melbourne, 5School of Public Health and Preventive Medicine, Monash University, Melbourne

Aims and rationale
Determine the patterns of utilisation of health services for type 2 diabetes (T2DM) management and adherence to the Royal Australian College of General Practitioners (RACGP) guidelines for recommended standard T2DM care. Further, we examined differences between metropolitan and regional locations.

Methods
A cross-sectional study of 285 adults with clinically diagnosed T2DM in Victoria, Australia. A participant self-administered questionnaire and anthropometric and biomedical measures were taken between June and November 2010.

Findings
The majority of participants (92%) had at least one visit to their general practitioners for T2DM and related health problems in the 6 months prior to the study; in the same time-frame 29% of participants had visited a practice nurse and a further 60% had visited other health professionals. Fifty per cent achieved the RACGP recommended HbA1c target levels of ≤7.0%, 15% had BMI ≤25 kg/m2 and 30% satisfied urinary microalbumin <20mg/L. Regional participants were more likely to visit a practice nurse than metro participants (unadjusted odds ratio (OR): 2.77; 95%CI: 1.60 to 4.80; p<0.001, adjusted demographic and other potential factors OR: 2.40; 95%CI: 1.19 to 4.83; p=0.01).

Implications for policy and practice
Health services for T2DM management may be under-utilised since many people with T2DM did not achieve RACGP recommended standard diabetes care. This indicates a need for effective implementation of multidisciplinary care plans, GP management plans and team care arrangements for T2DM management. In addition it appears necessary to develop and implement innovative approaches for T2DM management, e.g. interventions based on peer support.

Susan Koch1, Christine Beanland1, Christine While3, Fleur Duane1
1Royal District Nursing Service, 2Alzheimer’s Australia, Victoria

Aims and rationale
This study aimed to explore the thoughts and perceptions of older people, people with dementia, family carers and health professionals regarding management of medicine in the community.

Methods
Using a qualitative method, the research underpinning the project was grounded theory using semi-structured interviews and focus groups.

Findings
The key finding was that medicine management was a journey and had four distinct stages. Self-management described how motivations and incentives, the person’s values and beliefs, relationship with their health professional and the strategies used to adapt to age related changes supported their independence with medicine management.

Something changes identified factors that contributed to the transition from self-management to needing more help. These included functional and cognitive decline and disruption to medicine routines.

Family member advocacy and the carer role identified the impact of the caring role as under-recognised by health professionals.

Locus of control and the medication team described current assessment practices, barriers to team work, and changes needed to enable development of collaborative relationships.

Implications for policy and practice
A person-centred and strengths-based approach to assessment should be undertaken.

More consideration should be given to the family carer’s role.

Interpreters and translated medicines information should be made available when working with non-English speaking people.

The person’s motivations and incentives to take medicines and their attitudes towards their information needs should be explored.

Strategies to sustain prescription management should be offered to older people.

Medicine management requires ongoing monitoring.

Lal Rawal is a PhD student with the Monash University. Rawal’s research project focuses on peer support intervention for management of type 2 diabetes.

Chris Beanland is a nurse and physiologist who has worked in research, education, health practitioner regulation and private health industry organisations. At the RDNS Institute, Chris has developed and implemented research governance processes and is a team member contributing to research in dementia care and medicines self-management in the community.
30 Health ageing 2

Home visits and GPs who perform them
Christopher Harrison¹, Joan Henderson¹, Helena Britt¹
¹Family Medicine Research Centre, University of Sydney

Aims and rationale
Home visits will increase in importance with the population ageing. This study investigates the content of home visits and the characteristics of GPs who performed them between April 1998-March 2010.

Methods
Data from the national BEACH program (1,187,300 encounters from 11,873 GPs) were used to examine the content and rate of home visits and characteristics of GPs who perform them. Stepwise logistic-regression analysis to determine significant GP characteristics of those who perform 1+ home visits in 100 encounters.

Findings
Rate: Between 1998–99 and 2009–10, rate of home visits decreased from 18 to 6 per 1,000 encounters while proportion of BEACH GPs that performed 1+ home visits decreased from 41.3% to 20.1%.

Content: Compared with all BEACH encounters, home visits had more: female patients; older patients; patients from Non-English speaking backgrounds; Veteran affairs’ and Commonwealth Health Care Card holders; patients from major cities and Victoria; problems managed; chronic problems managed; medications prescribed; hospital/A&E referrals. Home visits also had fewer: patients from ACT and Queensland; new problems managed; medications advised for over-the-counter purchase; procedural treatments; specialist referrals; pathology and imaging ordered.

GP characteristics: GPs who did 1+ home visit in their 100 encounters were more likely to be: older; male; an Australian graduate; working more sessions; not FRACGP. Their practices were: smaller; major city; advantaged areas; not computerised. After stepwise logistic-regression, all significant variables remained except for FRACGP.

Implications for policy and practice
Policies encouraging GPs to perform home visits are needed to maintain these important services in the future.

Christopher Harrison is a PhD candidate who has been working as a senior research analyst at the BEACH program since 2002. He is interested in the impact the ageing of the population will have on Australian general practice.

Nurse practitioner models in aged care: developing a conceptual framework
Rachel Davey¹, Brenton Prosser¹, Shannon Clark¹
¹University of Canberra

Aims and rationale
A frustration often expressed by academic researchers and policymakers in primary health care is an apparent mismatch between respective research priorities and expectations. Academics bemoan a perceived oversimplification of their work, a reticence for independent critique and the constant pressure to pursue external funding. Meanwhile, policy makers look for research reports written in plain language with clear application, which are attuned to current policy settings and produced quickly. In a context where the 2009 Cutler Review called for stronger links between academic research, public policy and industry, such a mismatch can present a significant challenge. The aim of this paper is to present one attempt to overcome these challenges.

Methods
The paper reports on the development of a conceptual research framework through the following stages:

- identification of respective key stakeholder priorities
- recruitment of methodological approaches that support investigation of these priorities
- integration of these approaches into a coherent and comprehensive conceptual model
- design and adaptation of data collection tools that align with the model
- the process whereby this model was used to identify and select case study sites.

Findings
Specifically, the paper describes the development of a conceptual framework to underpin a large-scale, multifaceted national evaluation of an Australian Government initiative to grow nurse practitioner models in aged care.

Implications for policy and practice
This paper seeks to bridge gaps in research, policy and sector demands, which may be adopted and adapted by others facing similar challenges in primary health care research.

Professor Rachel Davey is Director of the Centre for Research and Action in Public Health, University of Canberra. Her research focuses on the primary and secondary prevention of chronic disease and in evaluating public health interventions and innovative models of health service delivery.
Medication safety in primary care: can a community pharmacy medication incident reporting system influence policy and practice?

Khaled Eddie1, Timothy F Chen1, Andrew J McLachlan1,2, William B Runciman3,4, Romano A Fois1
1Faculty of Pharmacy, The University of Sydney, NSW, 2Centre for Education and Research on Ageing, Concord RG Hospital, NSW, 3School of Psychology, Social Work and Social Policy, University SA, Adelaide, SA, 4Australian Patient Safety Foundation, Adelaide, SA

Aims and rationale
Incident reporting systems (IRS) are vital in helping understand the risks to medication safety in the acute care sector. Rigorous information on the unique risks associated with medication use in primary care is lacking. The aims of this study are: to determine the type, frequency, impact and causes of medication incidents detected in community pharmacy and to propose system-based improvements in processes, practices and policies.

Methods
Thirty community pharmacies were recruited to participate in a 24-month IRS study. Pharmacists were trained on reporting incidents and identifying the human and system factors that contribute to risks in medication use. Data analysis was carried out using AIMS® (Advanced Incident Management System) software.

Findings
553 incident reports have been received over 21 months and 172 analysed. Medication incidents occurred during all stages of the medication process, including prescribing (65%), dispensing (19%), administration (11%) and supply/ordering (5%). Factors that contributed to incidents related to cognition (57%), communication (32%), providers’ performance (6%) and staff supervision/assistance (3%). Analysis of incident-type clusters (e.g. errors in modified drug formulations) reveal immature safety processes and risk assessment within primary care practices (e.g. inadequate information on divisibility of oral dosage forms) and lack of safety design (e.g. confusing drug nomenclature).

Implications for policy and practice
Implementation of a medication IRS in primary care can detect and learn from medication incidents. A well-designed IRS may inform primary care policy and risk management and influence safety culture at organisation and practice levels.

Shannon Clark1, Brenton Prosser1, Rachel Davey1
1University of Canberra

Aims and rationale
Australia, like many industrialised countries, faces unprecedented challenges in the provision of primary health care to an ageing population. As a greater proportion of the population requires aged care and the relative tax-paying population decreases, greater efficiencies within existing systems will not be enough, innovation is needed. Attempts to respond to these challenges have resulted in changing models of primary health care and shifting professional boundaries, including the development of advance practice roles for nursing. Once such role is that of nurse practitioner and the aim of this paper is to review international literature around this emerging role.

Methods
This paper provides a current snapshot of literature by systematic examination in relation to ‘nurse practitioner’, ‘nurse practitioner-like services’ and ‘aged care nurse practitioners’. Methods used include keyword, database and bibliographic searches of international literature, as well as review of prominent previous policy reports in relation to aged care and advanced nursing roles.

Findings
This paper provides an overview of evidence from international contexts that nurse practitioners improve primary health care outcomes, particularly for marginalised communities, while mapping out the limited Australian evidence on the impact of nurse practitioners care in aged care settings.

Implications for policy and practice
The paper will also briefly report on a current research evaluation that seeks to provide new data on the effectiveness, economic viability and sustainability of aged care nurse practitioners in Australia.

Shannon Clark, PhD, is a post doctoral fellow in the Centre for Research and Action in Public Heath at the University of Canberra, and a visiting fellow at the Australian Primary Health Care Research Institute at the Australian National University.