



**EXPLORING THE BIG QUESTIONS
IN REGIONAL AND RURAL HEALTH**



Western Alliance Academic Health Science Centre is an alliance of Deakin University, Federation University Australia and the major health service providers across western Victoria. Its mission is to improve the health and wellbeing of western Victorians through collaborative health care, research, education and training.

PROGRAM

7:45–9:00am Breakfast (own expense), Gallery Bistro, Craig's Royal Hotel

9:30–9:55am Registration, outside Grand Dining Room

PLENARY: GRAND DINING ROOM

10:00am Professor David M. Ashley, Executive Director, Western Alliance AHSC
Master of ceremonies: Opening and housekeeping

10:10am Professor David Ashbridge, Chair, Western Alliance AHSC
Welcome address

10:20am Dr Helen Keleher Adjunct Professor in Health Science, School of Public Health and Preventive Medicine, Monash University. Keynote address:
Harnessing big data to improve health outcomes and health service delivery

READING ROOM

11:00am Morning tea

SCIENTIFIC SESSION A:

Current research in Western Victoria – trends, successes and challenges

GRAND DINING ROOM – 11:15am

Addressing the social determinants of health through the lifespan: Child and maternal health

Chair: Professor Penny Paliadelis,
Federation University Australia

Dr Claudia Strugnell, WHO Collaborating Centre for Obesity Prevention

Creation of a monitoring platform for childhood obesity and behaviours among primary school children in the Great South Coast region of Victoria

Susan Parker, Health Promotion Unit, Barwon Health

Reducing children's sweet drink consumption may be easier than you think!

Dr Michael Smith, Oral Health Services, Barwon Health

A preventative approach to oral health for children in the regional/rural community in south-west Victoria

Rochelle Hine, SouthWest Healthcare

Mothing with mental illness: Gender, identity and connectedness in personal recovery

PRINCES ROOM – 11:15am

Addressing the social determinants of health through the lifespan: chronic disease and ageing

Chair: Dr Nicolaas van Zyl,
Western District Health Service

Dr Sharon Brennan-Olsen, Deakin University

The social gradient of osteoporosis and osteoarthritis: Effective conduits to elucidate social-structural factors associated with disease and health service utilisation

A/Prof Mark Yates, Ballarat Health Services

The national rollout of the Dementia Care in Hospitals Program: Protocol for evaluation

Denise Fitzpatrick, Ballarat Health Services

Is today a good day to die?

Jade Odgers, Grampians Regional Palliative Care Team, Ballarat Health Services

'No one told me he was dying': End-of-life care in the acute hospital environment, family members' perspectives

PROGRAM

GRAND DINING ROOM

12:10pm Poster discussion session, chair **Dr Susan Joy Shea, Ballarat Health Services**

Jacinta Bourke, Western Victoria Primary Health Network: Evaluation of a pilot project to increase access to allied health services in four rural communities in south-west Victoria
Alasdair Sutherland, SouthWest Healthcare: Resilience and satisfaction in orthopaedic care
Prof Simon Cooper, Federation University Australia: Measuring translational impact: The FIRST2ACT patient deterioration management programs

READING ROOM

12:40pm Lunch and poster presentations

PLENARY: GRAND DINING ROOM

1:20pm Professor Steven Allender, Co-Director, World Health Organization Collaborating Centre for Obesity Prevention, Deakin University. Keynote address:
Big data for big problems: Chronic disease prevention from a systems perspective

SCIENTIFIC SESSION B:

Current research in Western Victoria – trends, successes and challenges

GRAND DINING ROOM – 2:00pm

Understanding rural and regional health in the western region

Prof Julie A. Pasco, Deakin University

Multifaceted applications of big databases for population-based research: Achieving better health for our region

Dr M. Amber Sajjad, Deakin University

Ageing, chronic disease and injury (ACDI) study: Cancer incidence in western Victoria

Dr Violet Mukaro, Barwon South Western Regional Integrated Cancer Service

The evaluation of cancer outcomes (ECO) Barwon South Western Registry: Concept to creation

Prof Peter Harvey, Greater Green Triangle University Department of Rural Health

A phoenix rising: Gambling disorder and the dodo bird conjecture

Dr Rebecca Jarvis, Deakin University

Community perceptions of drive-in drive-out (DIDO) and resident GP services in two towns in rural Victoria

PRINCES ROOM – 2:00pm

Dr Kaye Knight

Research: why do it and how could you use it?

A 90-minute workshop for health professionals wishing to dip their toes into the world of research.

PROGRAM

GRAND DINING ROOM

- 3:00pm **Poster discussion session**, chair A/Prof Susan Brumby, National Centre for Farmer Health.
Joshua Hayward, WHO Centre for Obesity Prevention: Development of a community action planning framework for addressing complex programs in Victoria
Dr Kara Holloway, Deakin University: Ageing, chronic disease and injury (ACDI) study: The epidemiology of joint replacements in western Victoria
Prof Julie A. Pasco, Deakin University: A conduit between epidemiological research and regional health policy

READING ROOM

- 3:30pm Afternoon tea

PLENARY: GRAND DINING ROOM

- 3:45pm **Professor David M. Ashley (moderator)**
Q&A panel: Dr Helen Keleher, Prof Steven Allender, Prof Brendan Crotty, Dr Nicolaas van Zyl
Exploring the Big Questions in rural and regional health for western Victoria, and innovations to address them
- 4:25pm **Professor David Ashley**
Symposium close

READING ROOM

- 4:45–6:15pm Social drinks

CONVENOR

Dr Renée Otmar BA GDEdPub MA(Comm) MPH GCALL PhD

Business and Communications Manager, Western Alliance Academic Health Science Centre

In her role as Business and Communications Manager at Western Alliance, Dr Otmar provides support and advice to the Executive Director and the Governing Council, including policy recommendations, and is responsible for Western Alliance's day-to-day operations, financial management, communications and staffing.

Renée has broad and extensive expertise in health communications research, policy research and writing, and in project management. Her early training and qualifications led to roles in public relations, book editing and publishing and, since 2002, to senior roles in the public health and academic sectors. Her strengths are in developing and leading teams, and in analysing, synthesising and tailoring complex scientific and technical data into communications suitable for their intended audiences, across diverse settings, contexts and formats.

SPEAKERS

Master of ceremonies

Professor David M. Ashley PhD MBBS FRACP

Executive Director, Western Alliance Academic Health Science Centre; Director of Cancer Services, Barwon Health; and Professor of Medicine, Deakin University and Barwon Health

Professor Ashley has had an extensive research career in cancer clinical care and research over two decades. His achievements in research have led to changes in clinical practice in the care of children and adults with malignancies, including the introduction of new standards of practice for the delivery of systemic chemotherapy. A recent major focus of his research has been on addressing inequities in cancer outcomes in regional and remote settings.

Welcome address

Professor David Ashbridge MBBS MPH DCH DTM GAICD MRACGP

Chair, Western Alliance Academic Health Science Centre and Chief Executive Officer, Barwon Health

Professor Ashbridge is the Chief Executive Officer of Barwon Health, the largest regional health service provider in Victoria, employing over 6000 staff and including a major teaching hospital. Services provided by Barwon Health encompass hospital, mental health, drug and alcohol, community health, aged care and rehabilitation services. David is Chair of the South West Alliance of Rural Health (SWARH) Executive, a member of the Healthy Together Geelong Governance Group (Health Promotion), Board member of the Committee for Geelong and a member of the Deakin University Council.

Keynote presentations

Professor Helen Keleher

Harnessing big data to improve health outcomes and health service delivery

Are rural areas ready for big data? How could it transform health care and health outcomes in rural communities? Health systems are becoming more data-driven but data sources are fragmented, hidden from end-users and collected in a myriad of different forms in both rural and metropolitan regions. Rural regions have just as much opportunity as metropolitan regions to forge ahead with big-data solutions. Dr Keleher will discuss how we might make sense of big data problems to create data-driven solutions for better health.

Dr Keleher is Adjunct Professor in Health Science at the School of Public Health and Preventive Medicine, Monash University. Until recently she was Director of Population Health at the Frankston–Mornington Peninsula Medicare Local. Helen has been a member of the Women and Gender Equity Knowledge Network for the World Health Organization's Commission on the Social Determinants of Health (2005–08) and past President of the Public Health Association of Australia. She is co-editor of the two popular texts *UnderstandingHealth* and *Understanding the Australian Health Care System*, published by Oxford University Press. Helen's work over many decades has been about understanding how best we can affect change in the determinants of health and health equity, especially through place-based, collective impact strategies.

Professor Steven Allender

Big data for big problems: Chronic disease prevention from a systems perspective

Professor Allender will present research at the cutting edge: how 'big data' is being harnessed to improve our understanding of complexities in lifestyle-related risks and outcomes for health and wellbeing. He will describe current work on prevention of childhood obesity that is seeking to address complex interactions of biological, behavioural, environmental and policy settings for chronic disease. This work will be presented in context of the potential for big data, whereby web-accessed data has proven a very strong addition to the armoury of population health monitoring. Steve will show how the high predictive validity of web-search activity for non-communicable disease risk has potential to provide real-time information on population risk during policy implementation and other population-level, non-communicable disease prevention efforts.

Steven Allender is Professor of Public Health and Co-Director of the World Health Organization (WHO) Collaborating Centre for Obesity Prevention at Deakin University. He holds a jointly funded National Health and Medical Research Council (NHMRC) / Australian Heart Foundation Career Development Fellowship and is co-lead for an NHMRC Australian Centre for Research Excellence in Obesity Policy Research and Food Systems.

Q&A panel

Professor David M. Ashley (moderator)

Members of the audience will be invited to ask questions and present comments of their own. To help set the scene, Professor Ashley will ask each panel member to respond to two key questions:

- 1) What are the Big Questions in rural and regional health for western Victoria?
- 2) What are the innovation needed to address or answer those Big Questions?

Professor Helen Keleher

Innovation attracts talent and leaders. Why we are not investing in big data is the Big Question! The Big Questions are about predicting care needs and measuring outcomes, and the innovations that are emerging are in Big Data.

Professor Steven Allender

How do we create a co-ordinated, evidence-based, community led response to chronic disease? Consider that obesity is the major leading cause for non-communicable diseases, and now for cancer. That prevalence of obesity in country Victoria is 40 per cent among some primary school children and that this generation will die 15–20 years younger than their parents – we can't 'do nothing'.

Professor Brendan Crotty MBBS MD FRACP

Member of the Governing Council, Western Alliance Academic Health Science Centre and Pro Vice-Chancellor, Faculty of Health, Deakin University

Why are rural and regional health outcomes worse than metropolitan health outcomes? If the answer to this question is not clear, what research needs to be done to understand the difference? What can we do about these poor health outcomes and the reasons for them? How can we address regional and rural health workforce shortages? We need to establish a collaborative research network across western Victoria to address poor health outcomes and trial solutions. We need to establish integrated e-health platforms to assist our research and improve access to healthcare. We need to establish regional training networks to train a health workforce equipped to practise in our region.

Professor Crotty was Foundation Head of the Deakin School of Medicine from 2006, with responsibility for the development, accreditation and delivery of the Deakin medical course. He was appointed Pro Vice-Chancellor (Health) at Deakin University in 2011 and is responsible oversight of five Schools, six Strategic Research Centres and multiple partnerships with regional health services, primary care services and human service providers. Brendan has been heavily involved in postgraduate medical training for many years, through the Royal Australasian College of Physicians, the Postgraduate Medical Council of Victoria and, more recently, as a member of the Australian Medical Council Prevocational Accreditation Committee.

Dr Nicolaas van Zyl MBChB MMed (Community Health) MBL PMP FAFPHM

Member of the Governing Council, Western Alliance Academic Health Science Centre and Director of Medical Services, Hamilton Base Hospital

Receiving health services close to home in rural western Victoria: Considerations and challenges for rural health services are to provide a comprehensive package of services, meet the health needs of rural people in western Victoria and be maximally localised to keep patients as close to home as possible. They also need to provide ample clinical pathways for referral to appropriate specialised services in close partnerships and collaboration with regional and academic services in metropolitan Victoria.

Dr van Zyl has been Director of Medical Services at Hamilton Base Hospital since May 2014. He was Chief Specialist/ Head: Clinical Services at Universitas Academic Hospital in Bloemfontein, South Africa before moving to Australia. Nic has extensive experience in medical administration, public health and health management teaching at postgraduate level. His research interests cover health systems research, rural health, telehealth and occupational health.

SESSION CHAIRPERSONS

Professor Penny Paliadelis RN BN MN(Hons) PhD

Professor Penny Paliadelis is the Executive Dean of the Faculty of Health at Federation University Australia. Penny's research interests focus on the use of digital storytelling in health curricula, collaborative inter-professional health education and practice, and rural health workforce capacity-building.

Dr Susan Joy Shea

Ballarat Health Services

Dr Nicolaas van Zyl

POSTERS ON DISPLAY IN THE READING ROOM

Presenting authors will be available for questions/discussion in the second half of the lunch break (1:00–1:20pm)

2015-0672 Sutherland A & Balasubramanian T. Resilience and satisfaction in orthopaedic care

2015-0673 Neels A, Dreyer L, Bibby M, Rosevear C & Walters D. South-west antimicrobial stewardship: Putting a stop to inappropriate prescribing

2015-0678 Haugh, N, Murnane M, Bourke J, Widdicombe K & McNeil L. Evaluation of a pilot project to increase access to allied health services in four rural communities in south-west Victoria

2015-0680 Hayward J, Owen B, Bell C, Whelan J, Lowe J, Millar L & Allender S. Development of a community action planning framework for addressing complex programs in Victoria

2015-0681 Holloway K, Sajjad MA, Brennan-Olsen SL, Kotowicz MA, Livingston PM, Khasraw M, Hakkennes S, Dunning T, Brumby T, Page R, Pedler D, Sutherland A, Venkatesh S & Pasco JA. Ageing, chronic disease and injury (ACDI) study: The epidemiology of joint replacements in western Victoria

2015-0682 Matheson L, Garrard B, Mukaro V, Ashley D, Pitson G & Henry MJ. Presentation to the Emergency Department prior to cancer diagnosis

2015-0685 Pasco JA, Foulkes C, Brown K, Doolan BJ & Brennan-Olsen SL. Deakin University: A conduit between epidemiological research and regional health policy

2015-0690 Cooper S. Measuring translational impact: The FIRST2ACT patient deterioration management programs

2015-0694 Beaumont F, Shea SJ, Burges V & Reasbeck P. Researcher qualifications and credentials – judging appropriateness

ABSTRACTS

Researcher qualifications and credentials – judging appropriateness

Beaumont F¹, Shea SJ¹, Burges¹ & Reasbeck, P²

1 Ballarat Health Services Senior Medical Governance, Workforce and Research Office

2 Ballarat Health Services, Executive Director of Medical Services (Executive portfolio – Research)

Aim: To develop a tool to support HREC to meet the requirement identified in both the National Statement (NS)² and the Australian Code³ in advising HRECs to assess whether research is 'justifiable by ... skill and expertise of researchers' (1.1a) and 'conducted or supervised ... with experience, qualifications and competence that are appropriate for the research' (1.1e).

Methods: An analysis was conducted of the various questions asked within the NEAF¹ about researcher's qualifications and credentials. A comparison was undertaken of the information provided within the NEAF¹ and that in the researchers' curriculum vitae provided for all active research approved by BHSSJOG HREC in 2014.

Results: A gap in the body of knowledge and processes for HREC to assess researcher qualifications and credentials was identified. It is apparent that there is no clear accepted definition of a researcher and what qualifications and credentials are required to conduct research.

Conclusion: The nature of the information allowed development of a BHSSJOG HREC Researcher declaration to support HREC consideration of researcher capacity to meet the requirement identified in both the National Statement (NS)² and the Australian Code³ and to minimise risk.

References:

1 National Ethics Application Form <https://www.neaf.gov.au/>

2 National Statement on Ethical Conduct in Human Research (2007) Updated March 2014

<https://www.nhmrc.gov.au/guidelines/publications/e72>

3 Australian Code for the Responsible Conduct of Research

<https://www.nhmrc.gov.au/guidelines/publications/r39>

Keywords: researcher qualifications; credentials

The social gradient of osteoporosis and osteoarthritis: Effective conduits to elucidate social–structural factors associated with disease and health service utilisation

Brennan-Olsen SL, Williams LJ & Pasco JA

Deakin University

Aim: The social gradient of musculoskeletal diseases has never been as prominent as in current times. Establishing conduits between large datasets at regional and national levels is imperative if we are to reduce the impact of lower socioeconomic status (SES) on musculoskeletal diseases.

Methods: Data linkage was performed between the Australian Bureau of Statistics and the (i) longitudinal Geelong Osteoporosis Study (GOS), (ii) patient records attending for bone density testing, (iii) GOS Fracture Grid, and (iv) Australian Orthopaedic Association National Joint Replacement Registry.

Results: We report that; lower SES is associated with lifestyle behaviours known to increase risk of osteoporosis and osteoarthritis; differences exist in fracture rates across the SES continuum; the World Health Organisation fracture risk tool provides robust fracture prediction and calibration regardless of SES; lower uptake of bone density testing is common for lower SES groups; policy changes in 2007 to reimbursement from Medicare Australia had minimal influence on bone density referral rates; and finally, that the differences in the uptake of knee and shoulder arthroplasty across SES groups that reflected the social gradient of disease.

Conclusion: These data have important clinical implications for health promotion, the design of targeted intervention strategies, and for informed resource planning.

Keywords: social disadvantage; inequity; musculoskeletal disease

Measuring translational impact: The FIRST²ACT patient deterioration management programs

Cooper S

Federation University Australia

Aim: This presentation will focus on the impact of a patient deterioration management program (FIRST²ACT) with specific reference to the clinical impact of the program

Methods: Funded from a variety of sources this program of research and education includes face to face simulation approaches and a web based e-simulation resource which includes seven interactive scenarios for healthcare professionals.

Results: In a series of studies over the last seven years the face-to-face program has been found to have a significant impact on learning outcomes and based on chart reviews and time series analyses a significant impact on registered nurse clinical care. This included improvements in the applicable frequency of observations ($p=0.025$), charting of pain scores ($p=0.001$), and improvements in oxygen therapy. Trials of the e-simulation program indicate significant improvements in knowledge and skills ($p<0.001$).

Conclusion: Face to face and web based intervention do have an impact and face-to-face options supported by web-based programs such as FIRST²ACTWeb™ are an effective way to enhance students' confidence, competence

and mastery of patient deterioration management. In this presentation the latest version of First2ActWeb will be demonstrated with results from the most recent trials with nurses and midwives.

See website at: <http://first2actweb.com/>

Is today a good day to die?

Fitzpatrick D¹, Odgers J¹, Penney W² & Keren Day K¹,

1 Ballarat Health Services

2 Federation University Australia

Background: Acute hospitals provide end-of-life care to the majority of people who die in Australia. Decisions about whether it is appropriate to escalate life-sustaining measures in patients with chronic, life-limiting illness are often postponed until there is a sudden deterioration. Then, families and health care workers are often required to make medical decisions without knowing the patient's preferences.

Ballarat Health Services is a regional public health service providing acute, subacute, aged residential and community services. It was recognised that while the health service had implemented a range of end-of-life care elements, this was not comprehensive or integrated.

Aim: To develop an integrated, systematic approach to delivering best-practice end-of-life care.

Methods: A multidisciplinary project steering group was established with key executives participating. Ethics approval was granted and this enabled key stakeholder consultation using focus groups and semi-structured interviews to establish attitudes to end of life care and death. Medical record and mortality review informed the establishment of outcome measures.

Results: A framework has been developed to integrate the end-of-life care elements of: advance care planning, identifying patients at risk of deteriorating or dying, medical goals of care documentation, a Care of the Dying Management Plan and explicit communication skills training.

Keywords: end-of-life; dying; framework

A phoenix rising: Gambling disorder and the dodo bird conjecture

Harvey P

Greater Green Triangle University Department of Rural Health, Deakin University and Flinders University

In this paper, the author reflects on the client treatment outcomes achieved through the Statewide Gambling Therapy Service (SGTS) in South Australia; a service providing cognitive and behavioural therapy (CBT) to treat clients seeking help for their gambling problems. The service has been running in its present form since 2007. During this time over 3000 clients have registered with the service, received treatment to varying degrees and been discharged to follow up in the community post treatment as defined by the research protocol registered with the Southern Adelaide Human Clinical Research Ethics Committee (SAC HREC) for this programme.

In addition to the collection of standard longitudinal outcome data, which has been reported in annual reports and longitudinal study publications, other purposefully designed studies have been implemented to explore the impacts and outcomes of the service.

Studies into relapse and relapse prevention, co-morbidity relating to gambling disorder and the outcomes of the in-patient version of the programme deploying the same CBT treatment as the out-patient programme have been completed and published. Further, a randomised controlled trial exploring cognitive and behavioural components of the treatment regimen, longitudinal studies of service outcomes and pilot studies involving clients in the prison sector and those being prescribed certain medications to assist them in overcoming their gambling problems have been implemented.

While this significant work effort has extended the boundaries of treatment research in the field, results remain equivocal in relation to the efficacy of treatments and efficiency of the service model, echoing the familiar claim that 'all treatments in this domain are effective to some degree; the Dodo Bird conjecture'.

It is postulated that the recent revival of the Dodo Bird conjecture in the field of gambling research may not be due so much to the mixed research findings proliferating in the area as it is to the imprecise nature of the business itself. The subjectivity around therapy provision, individual variance in therapist approaches and personal beliefs about therapy and its effects still remains. Also, the lack of definitive outcome measures available to assess, reliably, the changes in self-report data on gambling urge, anxiety, depression and the definitive 'gambling disorder' diagnosis over time are all factors contributing to the resurgence of the Dodo Bird that was witnesses at recent European Association for the Study of Gambling conference in Helsinki.

Keywords: gambling addiction, treatment and service outcomes

Evaluation of a pilot project to increase access to allied health services in four rural communities in south-west Victoria

Haugh N¹, Murnane M¹, Bourke J¹, Widdicombe K², McNeil L¹

1 *Western Victoria Primary Health Network*

2 *Colac Area Health*

Aim: This evaluation aimed to assess barriers and enablers to implementation, client and GP satisfaction and short term effectiveness of a pilot project using a team of allied health providers contracted through Colac Area Health (CAH) to provide services in four rural communities in South West Victoria using a Medicare Benefits Schedule (MBS) funded model.

Method: A mixed methods evaluation design was used. Service utilisation data was collected from CAH and general practices and survey data was collected from clients (n=20) and general practices (n=5) involved. A focus group was undertaken with the allied health providers (n=3) and an interview conducted with CAH.

Results: There was an increase in the number of; individual clients seen, occasions of service, tele-health services and claims for chronic disease MBS items. All clients surveyed were satisfied with the services and would use them again. GPs were satisfied with the support, information and engagement received and along with the allied health providers outlined the benefits of delivering these services closer to people homes.

Conclusion: Evaluation data was used to inform recommendations to guide project development for another 12 months, where further evaluation of this model will be undertaken. Understanding the barriers and enablers to this model will be crucial in determining potential replicability in other rural areas.

Keywords: rural; access; allied health

Development of a community action planning framework in Victoria, for addressing complex problems

Hayward J¹, Owen B¹, Bell C^{1,2}, Whelan J³, Lowe J⁴, Millar L¹ & Allender S¹

1 World Health Organization Centre for Obesity Prevention, Deakin University

2 School of Medicine, Deakin University

3 CO-OPS Collaboration, Deakin University

4 Southern Grampians Glenelg Primary Care Partnership, Hamilton

Aim: To create a logic model representing community systems and enable community stakeholders to plan local responses to complex health problems.

Methods: Three Group Model Building workshops were conducted with community leaders to develop Causal Loop Diagrams. The diagrams represented a "system map" of the drivers of a complex problem, examples of which included obesity, educational attainment, and mental and adolescent health. Participants (range 12–60) created collaborative, community-led responses based on the agreed logic models from the system maps. Participants agreed on shared priorities for change and located these within the logic models using the Meadows framework for levels of intervention in systems. Potential actions were informed by current evidence base with reference to the World Health Organization systems building blocks (leadership and governance, partners and networks, finance and resources, workforce development, information and intelligence).

Results: Community feedback and post-workshop evaluation from participants suggests this is an acceptable way to initiate community action. The process can be delivered in a range of communities for a range of problems. Immediate outcomes include implementation of tangible, community driven, and broad-reaching responses to complex problems.

Conclusion: The process described here represents a promising strategy for formulating community-led responses to complex health problems.

Keywords: complexity; community health

Mothering with mental illness: Gender, identity and connectedness in personal recovery

Hine R

South West Healthcare and Monash University

The experiences, strengths, challenges and outcomes of mothering with mental illness are becoming increasingly illuminated through an emerging research focus internationally. Studies emphasise the central role that mothering plays in the lives of women with mental illness and the joy, hope, meaning and purpose that being a parent engenders.

However mothers with mental illness may confront myriad complex challenges emanating from the illness and associated symptoms, effects of medication, social isolation and lack of support, stigma and discrimination and a range of socio-economic factors such as poverty, homelessness, unemployment, limited educational attainment and the ever-present threat of losing custody of their children.

Since the 1980s, mental health service delivery models have been informed and influenced by the consumer and carer advocacy movements. In particular, advocacy for the development and implementation of service systems based on promoting personal recovery, has seen these principles and values translated into national mental health policy in Australia and internationally. This represents a significant shift from an emphasis and reliance on clinical expertise as the basis for defining and informing recovery, to understanding the unique knowledge, strengths and capacity of each individual to direct their own recovery journey.

Leamy, Bird, Le Boutillier, Williams, and Slade (2011) conducted a systematic review and narrative synthesis of personal recovery literature and identified common characteristics of the recovery journey and key processes as reported in the literature. This led to the development of a conceptual framework for personal recovery in mental health. Abbreviated as the CHIME Framework, the five categories of processes outlined as predominant are Connectedness, Hope and optimism about the future, positive Identity development, Meaning in life and Empowerment (Leamy et al., 2011, p. 448).

Until recently, research on personal recovery and that conducted around parenting with mental illness had remained disparate (Maybery et al., 2015). This study will contribute towards bridging this gap by exploring selected components of the Leamy et al. (2011) personal recovery conceptual framework to a specific population group; mothers with mental illness who are living in rural contexts. Factors associated with (1) Identity development and (2) Connectedness will be investigated for mothers with mental illness who live in rural settings. The proposed thesis will explore how mothers with mental illness relate to the concept of personal recovery generally, and increase knowledge and understanding of how two key personal recovery processes are both supported and/or hindered.

Keywords: mothering; mental illness

Ageing Chronic Disease and Injury (ACDI) study: The epidemiology of joint replacements in western Victoria

Holloway KL¹, Sajjad MA¹, Brennan-Olsen SL¹, Kotowicz MA¹, Livingston PM², Khasraw M³, Hakkennes S⁴, Dunning T⁵, Brumby S¹, Page R⁶, Pedler D², Sutherland A⁷, Venkatesh S¹ & Julie A Pasco JA¹

1 School of Medicine, Deakin University

2 Faculty of Health, Deakin University

3 Royal North Shore Hospital, Sydney

4 Barwon Health

5 School of Nursing and Midwifery, Deakin University

6 Department of Orthopaedics, Barwon Health

7 Southwest Orthopaedics, Warrnambool

8 Pattern Recognition and Data Analytics (PRaDA), Deakin University

Background and aim: Epidemiological data are crucial for planning interventions and targeting prevention strategies, particularly in rural areas, where accessibility of health services may be lower.

Western Victoria includes residents from regional and rural communities, spanning a range of settings for targeting appropriate allocation of resources for reducing the burden of chronic diseases and injury, such as joint replacements. We aim to map the pattern of joint replacements across the region of Western Victoria, sub-divided into 21 Local Government Areas (LGAs).

Methods: Data from the National Joint Replacement Registry (NJRR) will be used to calculate rates of joint replacements for 2011 to 2013 inclusive. Geocoding is being performed by Pitney Bowes Software Pty Ltd according to patient addresses which are tagged with two socioeconomic codes (SA1/SEIFA) and an accessibility/remoteness code (ARIA).

Results: A total of 8289 addresses are being geocoded. The final dataset will include all types of replacements (including hip, knee, shoulder), both primary replacements and revisions, as well as identifying reasons for replacement (e.g. osteoarthritis).

Conclusion: The outcomes of this study will inform the development of interventions and services to address gaps in service delivery associated with joint replacements.

Keywords: joint replacement; injury; chronic disease

Community perceptions of drive-in drive-out and resident GP services in two discrete towns in rural Victoria

Jarvis R & Gill G

Deakin University

In small rural communities where health demands are insufficient to sustain a resident GP or attempts to recruit a permanent GP have failed, health services are being provided by non-resident GPs on a drive-in/drive-out (DIDO) or fly-in/fly-out (FIFO) basis. While DIDO and FIFO GP service delivery models are politically unpopular, the perceptions of residents in communities receiving these services have not previously been examined.

This study compared and contrasted perceptions of residents in two small towns in rural Victoria – one with a long-term resident GP (Town A) and the other serviced by permanent part-time GPs rotating out from the nearest regional centre on a DIDO basis (Town B).

Semi-structured interviews were conducted with key informants from community groups. Use of GP services and the perceived importance of GP residential status, local knowledge and social capital were examined. Data was interpreted using thematic analysis and cross-case analysis was performed using multi-case methods.

Patients did not necessarily choose the nearest GP to their place of residence despite the distances and inconvenience involved. Cross-case analysis revealed different reasons for seeking GP services out of town, with residents from Town A seeking greater choice or confidentiality and residents from Town B seeking improved continuity.

Keywords: rural workforce; FIFO; DIDO

Presentation to the Emergency Department prior to cancer diagnosis

Matheson LM¹, B Garrard B¹, V Mukaro V¹, Ashley DM², G Pitson G² and Henry MJ¹

1 Evaluation of Cancer Outcomes Study, Barwon South Western Regional Integrated Cancer Services

2 Andrew Love Cancer Centre, Barwon Health

Background: The emergency department's (ED) primary function is to provide attention to patients with acute symptoms. While timely cancer diagnosis is critical, the ED may not be the ideal location for diagnosis.

Methods: The Evaluation of Cancer Outcomes (ECO) Study is an initiative that extends population-based cancer data collection to include clinical and treatment information. Data was manually and electronically collected from medical records, clinical notes and information systems for all new patients with cancer who presented to hospital for diagnosis or treatment. This study investigates the first complete year (2009) for those within 50km of Geelong (n=1,307). The only ED servicing Geelong was at Geelong Hospital. ED presentations for patients identified in the ECO study were extracted from an electronic audit of Barwon Health medical records enabling the number of presentations 6 months prior to cancer diagnosis to be assessed.

Results: One in five (n=273) newly diagnosed cancer patients present to ED at least once in the 6 months prior to cancer diagnosis. One in nine (n=147) were diagnosed as a result of their ED visit. Patients presenting to ED were older (70.5 + 0.9 yr vs 66.6 + 0.4 yr, p

Keywords: emergency cancer diagnosis

The Evaluation of Cancer Outcomes Barwon South Western Registry – concept to creation

Mukaro V^{1,2,3}, Matheson L¹, Henry M^{1,3}, Garrard B¹, Pitson G^{1,2} & Ashley DM^{1,2,3}

1 Barwon South Western Regional Integrated Cancer Service

2 Andrew Love Cancer Centre, Barwon Health

3 School of Medicine, Deakin University

Aim: The aim was to develop a standardised method of collecting tumour stage at diagnosis, prognostic indicators, treatment and subsequent outcomes for newly diagnosed cancer patients. The Evaluation of Cancer Outcomes Barwon South Western Registry built on a pilot to establish a clinical quality registry (CQR) to monitor processes and outcomes and ultimately improve patient care.

Methods: The project is coordinated by the BSWRICS with Barwon Health appointed as the data custodian and includes all public and private hospitals within the Barwon South Western region. A database known as the Regional Aggregated Cancer E-Repository (RACER) was developed within the secure environment of the South West Alliance of Rural Health (SWARH) network which allows for semi-automated data extraction from clinical information systems. A literature review was performed to identify performance indicators of relevance. Preliminary indicators include the removal and examination of 12 or more lymph nodes in colon resections and radiotherapy following breast conserving surgery using benchmarks from the UK.

Results: Ethics approval was obtained across the 8 health services. Data will be presented on the preliminary indicators.

Conclusion: ECOBSW registry can serve as a model for a regional based cancer CQR allowing for valuable insights into patterns of care.

Keywords: clinical quality registry, performance indicators

South West antimicrobial stewardship: Putting a stop to inappropriate prescribing

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Introduction: In 2011 an antimicrobial stewardship committee from Western Victoria formed to implement Standard 3.14 Developing, implementing and regularly reviewing the effectiveness of the antimicrobial stewardship system in small rural health care facilities.

Methods: 18 acute and aged care health care facilities in the region participated in 2 point prevalent surveys in summer and winter from 2012 to 2014 (12 facilities in 2012, 13 in 2013 and 18 in 2014). Every antimicrobial prescription at each facility was assessed by the committee for appropriateness of prescribing according to the Australian Therapeutic Guidelines: Antibiotic and microbiological results. Education campaigns including General Practitioner prescribing sheets, consumer fact sheets and health professional education events were produced.

Results: In 2012, 30% of antimicrobials were appropriate. From 2012 to 2013, antimicrobial prescribing improved by 25%, and in 2014, 51% of antimicrobial prescribing was appropriate. Common inappropriate prescribing reasons were lack of clinical indication, inappropriate dosage or antimicrobial choice. Common inappropriate antimicrobial prescriptions include: asymptomatic urinary tract infections, long term therapy for urinary tract infections and unnecessary prescribing and inappropriate weight-based dosing of cephalosporins for surgical prophylaxis.

Conclusion: Further education and training for prescribers and nurses is required. In particular, prescriber-specific habits need to be addressed to improve use of antimicrobials in the region.

Keywords: antimicrobial stewardship; prescribing

'No one told me he was dying': End-of-life care in the acute hospital environment, family members' perspectives

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Background: This research explores family members' experience of the end-of-life care (EoLC) that their loved one received at Ballarat Health Services (BHS). Participants' were asked to describe the EoLC their relative received, including information given about the dying process by health care professionals (HCP).

Aim: The intent of the research was to explore the meaning of end of life care for family members. It is anticipated this research will inform the End-of-Life framework for BHS, in Victoria Australia.

Methods: A qualitative interpretative design was adopted and data was collected via semi-structured open-ended individual interviews. Interviews were audio recorded, transcribed and analysed to identify common themes.

Results: Thirteen participants shared their thoughts and memories of the death of their loved one, and five key themes emerged:

- Communication
- Preparation for death
- Follow up after death
- The care experience
- The dying experience.

Discussion: Health care professionals are positioned to play an integral role in supporting the person who is dying and also their family during EoLC. This care is a vital focus for HCP in the last days and hours of the person dying and their family. It is essential that HCPs in all settings are equipped to provide the highest possible standard of EoLC.

Conclusion: This research will inform the EoL framework being developed to integrate the elements of: Advance Care Planning, a tool to help HCPs identify patients who are dying, medical goals of care documentation, a Care of the Dying Management Plan and a range of other supporting tools and documents.

Keywords: palliative; family, dying

Reducing children's sweet drink consumption may be easier than you think!

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High consumption of sweet drinks has been associated with a number of health problems, including overweight and obesity, type 2 diabetes, osteoporosis and dental caries. In 2014, in partnership with Barwon Water, Barwon Health commenced working with primary schools to also become 'sweet-drink-free' settings.

The H2Only schools project aims to transition primary schools to be 'sweet-drink-free' environments. 1248 primary school students have been interviewed across 19 state and catholic primary schools in the Geelong region, asking them what they drink. We found:

- There are significant differences between school-based behaviours and those in the home environment.
- There are discernible changes in behaviour with progression through school.
- There are concerns.

Schools are engaging well. At this time, 14 schools have become H2Only environments. Of these, 9 have produced a large artwork which has been converted to signage for the front of their school – that shows the community that they are now 'sweet-drink-free' zones. 19 further schools have commenced discussions and processes to move toward becoming H2Only. Just 10 schools have either not yet been contacted or have elected not to engage with the project at this time. This project has enabled a healthier environment for 2860 children attending H2Only schools.

Keywords: children; sweet drinks

A conduit between epidemiological research and regional health policy

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Background: The development of effective policies and strategies for supporting better health builds on quality evidence. Healthy Together Geelong, an arm of the State Government's Healthy Together Victoria initiative, was tasked with addressing underlying causes of poor health in Geelong and to strengthen regional preventive health systems. Data from the Geelong Osteoporosis Study (GOS) provided detailed evidence about the population's health. We aimed to translate these data from a research setting into a useable format to inform strategies for encouraging healthy lifestyles and service planning within local government.

Methods: The GOS is an ongoing large population-based cohort study that prospectively documents clinical, socio-demographic and lifestyle behaviours from adults, randomly-selected from electoral rolls. The most recent GOS follow-up phases provided evidence about patterns of unhealthy diet, physical inactivity, smoking and harmful alcohol use. These factors are well-recognised modifiable risk factors for chronic disease; the dataset was complemented with prevalence estimates for musculoskeletal disease, obesity, diabetes, cardiovascular disease, asthma and cancer.

Results/Discussion: Data were provided in aggregate form according to age, sex and suburb. The data exchange was a conduit between epidemiological research and policy. Importantly, rather than relying on national/state health surveys, regional policy makers were informed by local evidence, thereby optimising intervention strategies.

Key words: evidence base; population health; translation

Multifaceted applications of big databases for population-based research: Achieving better health for our region

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Background: Increasing longevity in populations is driving an escalation in chronic disease burden. Epi-Centre for Healthy Ageing (ECHA) aims to generate databases that describe the epidemiology, identify risk factors and plan resources for chronic disease (osteoporosis, sarcopenia, arthritis, diabetes, obesity, cancer, cardiovascular disease). Our databases create opportunities for data-linkage with health/administrative databases and contribute to multi-centre meta-analyses.

Methods: ECHA conducts population-based studies in our region: (i) Geelong Osteoporosis Study (GOS) prospective cohort study documenting clinical and lifestyle data, medications, disease incidence/prevalence; (ii) GOS-FractureGrid lists all incident fractures; (iii) Ageing, Chronic Disease and Injury (ACDI) ecological study describing disease and injury in Western Victoria.

Results: GOS-defined/informed musculoskeletal reference ranges; a clinically-useful fracture risk score; seasonal variations in serum vitamin D; bone effects of pharmacological agents and health behaviours; new diagnostic criteria for coeliac disease; through data linkage, social gradient of disease and joint replacement, health service utilisation, risk factors for mortality and aged-care utilisation; (inter)national meta-analyses; public lectures; Australian Institute for Health and Welfare and Osteoporosis Australia reports; Healthy Together Geelong and Geelong Council infrastructure plans. GOSFractureGrid-described fracture epidemiology, temporal changes and fracture projections. ACDI highlighting geographical heat maps for chronic disease.

Conclusion: Translation of credible population-based data continues to inform public health messages, clinical practice and policy development.

Key words: chronic disease; population health

Ageing, Chronic Disease and Injury (ACDI) study: Cancer incidence in western Victoria

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Background/Aims: To describe the epidemiology of cancer in Western Victoria.

Methods: Incident cancer data (2010-2013) obtained from the Victorian Cancer Registry for 21 Local Government Areas in the region (ages 40+), were age-standardised (Australia) and expressed as Mean (95%CI)/10000/year.

Results: Overall, cancer incidence was higher in men than women, 124.3(121.4-127.3) vs 97.4(94.9-99.9). Incidence increased with age; 15-fold higher (men) and 5.6-fold higher (women) for age 80+ years compared with 40-49 years.

Men: West-Wimmera had the highest incidence of 'all' cancers, 157.7(121.6-193.8) and prostate cancer 45.4(25.8-65.0), while Pyrenees had the lowest, 106.1(82.5-129.6) and 26.1(13.8-38.4). Bowel cancer incidence ranged from 12.6(6.9-18.2) in Hepburn to 23.4(14.8-32.0) in Northern-Grampians. Lung cancer incidence varied between 3.5(0-10.9) in Queenscliffe to 25.7(4.5-16.7) in Central-Goldfields. Hepburn, 17.7(11.0-24.4), had the highest incidence of melanoma while Glenelg, 6.1(2.7-9.4), had the lowest.

Women: Queenscliffe had the highest incidence of 'all' cancers (137.3(100.9-173.8)) while Horsham had the lowest (85.5(72.2-98.8)). Breast cancer incidence ranged from 46.3(27.2-65.4) in Queenscliffe to 19.8(13.1-26.5)

in Corangamite. Bowel cancer incidence ranged from 24.0(16.4-31.6) in Corangamite, to 10.3(5.4-15.1) in Hepburn. Lung cancer incidence was lowest in Pyrenees, 1.2(0-3.5) while Hindmarsh had the highest, 11.0(2.6-19.3). Incidence of melanoma varied from 25.8(10.0-41.6) in Queenscliffe, to 2.1(0-6.1) in West-Wimmera.

Conclusions: Cancer incidence showed age-sex-and-location-related variations. Further analyses will determine incidence and outcomes in relation to socioeconomic status, remoteness and health behaviours.

Keywords: incidence; cancer; western Victoria

A preventative approach to oral health for children in the regional/rural community in south-west Victoria

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Our aim was to improve access to dental services for children by providing dental assessments to children who may otherwise not attend clinics.

In 2013, Barwon Health and Colac Area Health partnered in developing an outreach program for Kindergarten children (3-5yrs) named Kinder Wide Smiles (KWS). Fifty eight centres throughout the Geelong (44) and Colac-Otway (14) region were visited. Children received three dental check-ups during the year and fluoride application (0.25ml/tooth) with Duraphat® (Colgate-Palmolive Pty. Ltd.) for white spot lesions (ICDAS score of 01, 02 or 03). Oral health therapists recorded scores for tooth surfaces in a database.

During 2013, 2320 children (65% participation rate) had dental screenings. At Visit 1 there were 1989 children screened with 1189 (60%) presenting with no signs of decay. Of the remaining 40%, 631 children (32%) had at least one surface with an ICDAS of 01 or 02 and potentially reversible. In total there were 565 surfaces scored 01 and 1359 scored 02. At Visit 2, 68% of these surfaces with initial signs of decay remained stable or improved. At Visit 3, 66% of surfaces remained stable.

In 2014, the program continued for Kindergartens in the region and the participation rate increased to 71%.

Keywords: oral health; children; regional/rural

Creation of a monitoring platform for childhood obesity and obesogenic behaviours among primary school children within the Great South Coast region of Victoria

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Aims: This study aims to examine changes in obesity and obesogenic behaviours among primary school children in the Great South Coast region of Victoria. In partnership with health services, primary care partnerships, local government and schools a childhood obesity monitoring system with biennial assessments was devised and implemented in 2015.

Methods: In Term 2 (April – June) 2015 all government primary schools within the Great South Coast region were invited to participate in a baseline survey. All students within Grade 2, Grade 4 and Grade 6 at consenting schools were invited to have their height and weight measured by trained personnel. Additionally, Grade 4 and Grade 6 students were invited to complete an electronic questionnaire examining their physical activity, sedentary behaviour, dietary intake and aspects of well-being. An opt-out consent process was applied with ethical approval.

Results: A total of 46/67 government primary schools in the region agreed to participate (response rate = 69%). Data collection concludes on the 26th June and full results will be available by August.

Conclusion: This study is an Australian first through the establishment of a collaborative, cost-efficient and high participatory childhood obesity monitoring system.

Keywords: childhood obesity; monitoring

Resilience and satisfaction in orthopaedic care

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Methods: Patients admitted for surgical treatment of a variety of orthopaedic conditions were recruited to the study after giving informed consent to participate. At admission, they were asked to complete questionnaires assessing resilience (Connor Davidson Resilience Scale, CDR) and overall function (Short Form-12 and EQ5D). Demographic data were collected. After three months, patients were asked to complete the same forms, along with a satisfaction survey, both categorical and VAS.

Results: 100 patients were recruited to the study and 71 completed follow up. Patient mean age was 45, and 53 were female. The mean initial CDR score was 33/40. 70% of the patients were satisfied with their care, and satisfaction VAS was more strongly correlated with CDR score (Pearson correlation 0.740, p

Keywords: resilience; satisfaction; orthopaedics

The national rollout of the Dementia Care in Hospitals Program: Protocol for an evaluation

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Background: The Dementia Care in Hospitals Program (DCHP) is an all-of-hospital education and culture change program to improve the awareness of and communication with patients with cognitive impairment (CI) in the acute sector. It was developed at Ballarat Health Services and has been introduced to 25 hospitals across Victoria. The program has now received Department of Social Services funding to rollout to four States with a detailed evaluation by Deakin University.

Method: The evaluation is based on step-wedged methodology and will be implemented across four hospitals in Adelaide, Canberra, Perth and Hobart. The patient population is all acute admissions over the age of 65 years in a given time period. The primary outcome is the proportion of people aged 65 years and over with CI and one of

four adverse events between the pre- and post-intervention periods. Sub-analysis will consider adjustment for each adverse event using a Generalised Linear Model. We will also evaluate the impact of the DCHP on patient quality of life, hospital length of stay and costs, carer satisfaction, staff knowledge and change in practice and other nursing modifiable hospital acquired adverse events. A cost-effectiveness analysis will also include the costs of implementing the program.

Keywords: cognitive impairment; hospitals; adverse events

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