



Advances in Public Health and Health Services Research at UNSW

Medicine

School of Public Health and Community Medicine

2011 Annual Research Symposium

5 August 2011

The John Niland Scientia Building

University of New South Wales

The 2011 Annual Research Symposium
Advances in Public Health and Health Services Research at UNSW
is presented by:

The School of Public Health and Community Medicine
Australian Institute of Health Innovation (AIHI)
Centre for Primary Health Care and Equity (CPHCE)
The Kirby Institute for infection and immunity in society
National Drug and Alcohol Research Centre (NDARC)

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WELCOME

WELCOME TO THE THIRD SYMPOSIUM ON 'ADVANCES IN PUBLIC HEALTH AND HEALTH SERVICES RESEARCH AT UNSW'

Medicine at The University of New South Wales (UNSW) is proud of its reputation as a leading national and international research-intensive Medical School.

At this year's third Symposium, we will be showcasing the most exciting elements in research from the School of Public Health and Community Medicine and affiliated Research Centres. The Centre for Primary Health Care and Equity, The Australian Institute of Health Innovation, The Kirby Institute for Infection and Immunity in Society and The National Drug and Alcohol Research Centre, together form the strongest concentration of expertise and capacity in population health and health services research in Australia.

The Keynote Speaker is Dr Tom Calma, former Aboriginal Social Justice Commissioner who will discuss the importance of tobacco and alcohol control in closing the gap.

The program includes a focus on health inequalities, translational research and global health, as well as research using innovative methodologies such as data linkage and mixed methods.

As Dean, I am justifiably proud of the breadth and depth of the achievements of the School and the Research Centres. The speakers you will hear from and the presentations you will see, spring from work that is contributing on a daily basis to the improvement of the health and well-being of all Australians. I am confident you will be impressed by what you will hear and come away with an enhanced understanding of what we do and a sense of why I feel so strongly about it.

For those of you who work in related fields, I hope this Symposium will provide inspiration to assist in your own endeavours and for some it may lead to future collaborations and partnerships or to the strengthening of existing ties. Networking with like-minded colleagues is after all, the most powerful justification for meetings such as this.

For others, I hope we can provide you with a window into some of the fascinating and life-enhancing work we are doing here at UNSW. I commend our Symposium to you. Please enjoy the day and I trust you will find this valuable.

Professor Peter J Smith
Dean, Faculty of Medicine



PROGRAM

TIME	SESSION	SPEAKER / CHAIR
08:30-10:00	WELCOME: GALLERY ONE	
08:30-09:00	Guest Arrival and Registration	
09:00-09:05	Welcome to Country	Aunt Ali Golding
09:05-09:15	Welcome Address	Professor Terry Campbell
09:15-10:00	Keynote Address - Life expectancy is not the only gap that needs to be closed	Dr Tom Calma
10:00-10:30	Morning Tea - Tyree Room	
10:30-11:30	SESSION 1A: HEALTH INEQUALITY - GALLERY ONE	DR HOLLY SEALE
10:30-10:45	Overview of Indigenous health world wide: The World Health Report 2010	Prof Lisa Jackson Pulver
10:45-11:00	Ongoing health inequity for Aboriginal people through research	James Ward
11:00-11:15	The Gudaga Study: Descriptive research informing delivery of health services for urban Aboriginal infants and their mothers	Dr Rebekah Grace
11:15-11:30	Do the developmental trajectories of health, social wellbeing and learning outcomes vary between Indigenous and non-Indigenous Australian infants?	Dr Jack Chen
10:30 - 11:30	SESSION 1B: CLINICAL TRIALS - GALLERY TWO	PROF MARK HARRIS
10:30-10:45	The impact of a community action RCT in reducing alcohol-related harm: The Alcohol Action in Rural Communities (AARC) project	A/Prof Anthony Shakeshaft
10:45-11:00	Cardiovascular risk assessment	Dr Elizabeth Denney Wilson
11:00-11:15	Reducing smoking among male prisoners	Prof Robyn Richmond
11:15-11:30	Reducing impulsivity in repeat violent offenders using a selective serotonin reuptake inhibitor (Sertraline) - Pilot study results	Prof Tony Butler
11:30 - 12:30	SESSION 2A: GLOBAL HEALTH - GALLERY ONE	PROF TONY BUTLER
11:30-11:45	Is the tail wagging the dog or the dog wagging the tail? Are infection control programs in high resourced healthcare systems equitable or realistic for our lower resourced neighbours?	Prof Mary-Louise McLaws
11:45-12:00	Decriminalising illicit drug use in Portugal: Impacts on prevalence and patterns of illicit drug use	Dr Caitlin Hughes
12:00-12:15	Mortality trends in Fiji	Prof Richard Taylor
12:15-12:30	Authorship placing as a measure of capacity building in health research	Skye McGregor
11:30 - 12:30	SESSION 2B: APPLIED TRANSLATIONAL RESEARCH - GALLERY TWO	PROF ROBYN RICHMOND
11:30-11:45	Implementation of chronic disease prevention guidelines in Australian general practice	Prof Mark Harris
11:45-12:00	Using routinely-collected electronic data from the ePBRN: Quality, methods and ontologies	Jane Taggart
12:00-12:15	Does HIV treatment reduce HIV transmission in gay men?	Prof Andrew Grulich
12:15-12:30	Hammond Chair of Positive Ageing and Care: Vision for research 2011-2015	A/Prof Chris Poulos
12:30-13:30	Lunch - Tyree Room	

TIME	SESSION	SPEAKER / CHAIR
13:30 - 14:30	SESSION 3A: COHORT AND DATA LINKAGE - GALLERY ONE	DR ROBERTO FORERO
13:30-13:45	A women's drug clinic in Iran: Improvements in drug use, social functioning and low HIV / HCV seroincidence	Prof Kate Dolan
13:45-14:00	Continuing declines in genital warts in young women and heterosexual men: Population effects of the national quadrivalent HPV vaccination in Australia, 2004-2010	Prof Basil Donovan
14:00- 14:15	Use patterns and harms: People who inject drugs and regular Ecstasy users providing an evidence-base for policy	Laura Scott
14:15-14:30	Relationship between clinical control of diabetes and hospitalisation for general practice patients with diabetes: A data linkage study	A/Prof Elizabeth Comino
13:30 - 14:30	SESSION 3B: QUALITATIVE AND MIXED METHODS - GALLERY TWO	DR HOLLY SEALE
13:30-13:45	Effective media advocacy strategies for quality and safety professionals.	Dr David Greenfield
13:45-14:00	The acceptability of a family based alcohol intervention to Indigenous clients of a rural Aboriginal Community Controlled Health Service and Drug and Alcohol treatment agency	Bianca Calabria
14:00- 14:15	Healthy.me: Impact of a web-based personally controlled health management system on healthcare consumers – preliminary results from three studies	Dr Annie Lau
14:15-14:30	Perceived prescribing competency and acceptance of a computerised provider over entry system	Dr Melissa Baysari
14:30 - 15:00	SESSION 4A: STUDENT PRESENTATIONS: COHORT AND DATA LINKAGE - GALLERY ONE	PROF SHANE DARKE
14:30-14:35	Expected epidemiological impacts of introducing an HIV vaccine in Thailand: A model based analysis	Karen Schneider
14:35-14:40	Sex and drugs in inner-city Sydney: Sexual risk behaviours and barriers to safe sex among drug users accessing low-threshold primary healthcare	Md Mofizul Islam
14:40-14:45	Cardiovascular absolute risk assessment and prescribing: What do GPs do	Dr Sanjyot Vagholkar
14:45-14:50	How can evidence-based programming contribute to health equity?	Jacqueline Ramke
14:50-14:55	HIV/STI's amongst self-identified men who have sex with men in Angiang, Vietnam	Quang Duy Pham
14:30 - 15:00	SESSION 4B: STUDENT PRESENTATIONS: QUALITATIVE AND MIXED METHODS - GALLERY TWO	DR DAVID GREENFIELD
14:30-14:35	Patient decision-making in motor neurone disease care	Anne Hogden
14:35-14:40	Validation of a video game device for measuring fall-risk	Daniel Schoene
14:40-14:45	The production of patient safety in mental health care	Jennifer Plumb
14:45-14:50	A pilot study to investigate measurement of physical activity in the general practice team	Shona Dutton
14:50-14:55	Life expectancy in an eastern seaboard Aboriginal cohort	Bronwen Phillips
15:00- 15:30	Tea - Tyree Room	
15:30- 16:30	DEBATE: GALLERY ONE - 'THE GOVERNMENT HAS DROPPED THE BALL ON PUBLIC HEALTH' Prof Michael Farrell, Prof Mark Harris, Prof Lisa Jackson Pulver, Prof Mary-Louise McLaws, Prof Richard Taylor, A/Prof Heather Worth	PROF RAINA MACINTYRE
16:30- 17:00	AWARDS CEREMONY - FOYER	PROF DENIS WAKEFIELD

Overview

The School has a vibrant and active research culture, evidenced in the work of our many research students (currently over 100 enrolled) and academic staff, our significant track record of publications, our successful history of research grants, and the trans-disciplinary backgrounds and experience of our academic and research staff. In addition to academic staff based in the School, our many conjoint staff and those within our affiliated Research Centres contribute significantly to our research profile. Our projects range in scope from randomised controlled trials to qualitative studies, and is funded by many sources including NHMRC and ARC.

The four major research strengths of the School are:

- Infectious Diseases
- Indigenous Health
- Global Health
- Primary Health Care

Staff in the School also contribute to the following areas of expertise:

- Ageing, centenarian health and geriatric medicine
- Biostatistics
- Epidemiology
- Health economics
- Health promotion
- Health services and systems
- Health service management and human resources
- Mathematical modeling
- Mental health
- Psychosocial issues
- Qualitative research
- Refugee health
- Research methods
- Scholarship of learning and teaching
- Smoking cessation interventions
- Sexual health
- Social determinants of health



Research Strengths

Infectious Diseases

We specialise in emerging infectious diseases, influenza and other respiratory viruses, vaccines and vaccine-preventable diseases, hospital infections and patient safety, infections in special risk populations (immunosuppressed, refugees, healthcare workers) and travel health. We also have an International HIV research group.

Staff are involved in key NHMRC and ARC funded grants. Our staff sit on state, national and international expert committees in the control of infectious diseases.

The School has a large critical mass of multidisciplinary expertise in epidemiology, mathematical modelling, health economic modelling, special risk populations, social research and clinical research in infectious diseases. In particular, staff have necessary training to bridge these diverse areas and bring them together in truly multidisciplinary research. For example, our clinical trials have within them sub-studies that involve mathematical modelling and health economic evaluation. This allows the maximum value to be gained from our research.

The multidisciplinary nature of our research also facilitates the translation of research outcomes into policy and practice.

Clinical research includes individual and cluster randomised, controlled trials of drugs, vaccines and non-pharmaceutical interventions in the treatment and prevention of infections.

We lead groundbreaking work on the use of face masks in the community and in health workers to prevent transmission of respiratory infections, including studies in China and Vietnam. Travel and emerging infections, hospital infection control, health worker research and refugee health are other areas of research strength.

Our modeling, data linkage and economic groups has links with the National Centre for Immunisation Research and conducts a range of studies to inform policy on vaccine preventable diseases.

GlobalHealth@UNSW

GlobalHealth@UNSW represents a critical mass of researchers, teachers, development workers and practitioners who are committed to partnering with others to enhance the quality of global health and development and to promote equity, social justice and the right to health. GlobalHealth@UNSW is a functional network of members with demonstrated expertise in strengthening health systems and in researching and teaching around global health and development issues.

GlobalHealth@UNSW has an appreciation of the challenges to development in the Asia Pacific and beyond. Members work with communities, government and service providers, donor agencies including AusAID, UN agencies and NGOs (local and international). The emphasis is on facilitating system learning to more effectively tackle health and development challenges. GlobalHealth@UNSW contributes to building leadership and expertise in partner institutions and countries and has a commitment to building research and analytic capacity and to promoting evidence-informed policy and practice. A strong component of current activity is a partnership with the Health Strategy and Policy Institute, part of the Ministry of Health in Vietnam. This AusAID-funded initiative contributes to building capacity in health systems research and policy analysis as well as strengthening skills in research methods and analysis. GlobalHealth@UNSW works with the Ministry of Health and other organizations in Timor-Leste to research and strengthen health system development.

A particular area of ongoing research concerns foci on post-conflict and fragile states, the humanitarian system and public health response, and on promoting innovation and learning by facilitating exchange between civil society, governmental and academic organizations. GlobalHealth@UNSW collaborates on a range of global sexual and

THE INTERNATIONAL HIV RESEARCH GROUP (IHRG)

The International HIV Research Group (IHRG) conducts HIV social research in Asia and the Pacific region in partnership with local researchers and institutions.

IHRG's research is based on an acknowledgement of local understandings of social settings and cultures – the contexts in which HIV infection occurs and in which the impact of HIV is felt and the findings from our research demonstrate that social science evidence can be used in every part of a country's response to HIV. IHRG work has provided:

1. Baseline behavioural data before setting up HIV prevention programs;
2. Long-term behavioural monitoring of progress;
3. In-depth social data to enhance understandings of why people are at risk;
4. Evidence of stigma and discrimination;
5. Assessment of the social impacts of the roll-out of new treatment and support programs; and 6. Social assessments of policies and laws related to HIV.

Central to the work of International HIV Research Group is a commitment to building local research .

In order to deliver excellent results we work with local universities and research institutes. In establishing partnerships with local institutions we build research, managerial and fund-raising capacity, representing an important contribution to indigenous, long-term, sustainable social research response to the HIV epidemic in the region.

Working on International HIV Research Group projects, researchers from China to Papua New Guinea have increased their personal professional capacity and prospects. In doing so the national pool of skills researchers has been enhanced. For example, in partnership with the Papua New Guinea Institute of Medical Research, we trained 10 early career researchers to design and implement research and to analyse research data. These early career researchers conducted the first multi-site study of the social impacts of ART in PNG, a mixed method study of PLWHA on ART. In collaboration with Igat Hope, the PNG PLWHA national body, findings from this study have been developed into recommendations to improve the treatment, care and support of people on ART in PNG.

reproductive health research activities and works with SPRINT, a partnership to promote advocacy and service implementation around sexual and reproductive health services provision and gender sensitivity in conflict-affected settings. Strong links with the UNSW Population Mental Health Research Group are present, in particular around studies of mental health, explosive anger, and gender-based violence in Timor-Leste.

Enhanced human resource development and management are seen as core to tackling health system problems. The AusAID-funded Human Resources for Health Knowledge Hub at UNSW contributes to addressing key gaps in knowledge around human resources for health and will facilitate access to available experience and insights across the Asia-Pacific. GlobalHealth@UNSW and the Human Resources for Health Knowledge Hub work as one to explore human resource dimensions to addressing public health emergencies. Only in the presence of well functioning health systems can country priorities and needs be identified, strategies developed and implemented, and all partners engaged in both upstream preventive and downstream service delivery and rehabilitation needs.

GlobalHealth@UNSW has led seminar series on the use of systematic reviews in health and development issues and has recently won bids to undertake a number of key systematic reviews. The Global Health Journal Club and an initiative to establish an online community of practice for global health and development PhD students and their supervisors is being developed. Strong commitment to working together with Muru Marri Research Unit is present, particularly in relation to international and global dimensions to indigenous health research.

Indigenous Health

Indigenous health research is a recognised research strength of the School of Public Health and Community Medicine. This work is led by the Muru Marri Indigenous Health Unit, comprised of a group of researchers, educators, and practitioners who are committed to working collaboratively with our critical friends, community partners and institutional allies to achieve equity, empowerment and social justice.

Muru Marri works in partnership with communities, addressing urban issues alongside rural and remote, seeking to 'strengthen strengths' rather than correct deficits; and we prioritise the promotion of wellness, wellbeing and sense of belonging, more than the absence or prevention of disease. We also have a strong focus on enhancing data quality and using that data to inform, demonstrate and advocate.

HUMAN RESOURCES FOR HEALTH KNOWLEDGE HUB

The Human Resources for Health Knowledge Hub is funded for three years with a \$6 million AusAID Grant until the end of 2011, and has been recently re-funded at the same level to mid 2013.

The HRH Hub@UNSW is one of four Knowledge Hubs established by AusAID to bring evidence based knowledge to support the strengthening of Health Systems in developing countries.

The main function of the HRH Hub@UNSW is to create, collate, synthesize and disseminate knowledge for policy decisions to address the world wide critical shortage and maldistribution of Health Workers of all cadres.

This shortage of Health Workers is one of the main factors in why Health Systems in developing countries have low capacity and are challenged when it comes to delivering the Millennium Development Goals.

The work of the Hub is focused on Human Resources issues in relation to Health Worker Migration; Leadership and Management; Maternal, Neonatal and Reproductive Health; and Human Resources in Public Health Emergencies.

The Hub disseminates findings in various formats including at conferences, and through brief and detailed technical and policy reports in hard copy and electronic format.

To Aboriginal people, health and wellbeing is more than the absence of disease. Ill-health can be a manifestation of many things, including spiritual and emotional alienation from Land and Country and family and culture. Tied to this, Land and Country are central to Aboriginal people's identity and spiritual beliefs, as they are to wellbeing; just as are connections to family and community.

This concept of health and wellbeing forms the core and philosophy of Muru Marri's work. 'Muru' in the Eora language means 'path' and 'Marri' means 'many'; together they reflect the many and diverse paths Muru Marri travels, premised on the understanding that there is no single way to improve Indigenous health.

Members of Muru Marri are internationally recognised for academic leadership and expertise in public health, epidemiology; as well as for contributing to the improvement of and effective use of data to guide policy and practice to improve health and wellbeing.

Our research and teaching focus on social, emotional and physical wellbeing across the lifespan – from birth to Elder – and involves ways of working that embrace and uphold community sanctioned social, cultural and ethical principles.

Our philosophical approach allows projects to achieve sustainability, whilst simultaneously enhancing positive impact and methodological rigour.

Examples of this contribution is seen in the NHMRC-funded Gudaga Project (CHETRE/MMIHU), the Koori Growing Old Well Study (POWMRI/MMIHU), the Review of Social and Emotional Wellbeing and Mental Health Services of the Many River Alliance (MMIHU) and a Review of Evidence for Policy and Practice in promoting Social and Emotional Well Being among Indigenous Youth. All these projects fill crucial gaps in our understanding of the experiences, health, wellbeing, social issues and service needs of Aboriginal people, particularly in urban Australia.

Primary Health Care

Primary Health Care research is a major strength of the School through staff located at the School's affiliated Centre for Primary Health Care and Equity (CPHCE) and through researchers located within the School. The Primary Health Care Group conducts research under the following four themes:

1. Behavioural risk factor management and chronic disease prevention;
2. Understanding and intervening to address health inequalities;
3. Management of chronic disease; and
4. Primary health care policy.

Much of the work on these themes takes place within the Centre for Primary Health Care and Equity and also in collaboration with other staff in the Faculty of Medicine and with other universities.

The focus of the work in the School is on: management of chronic disease; and prevention, including intervention on risk factors for chronic illness such as tobacco smoking.

The Primary Health Care group is also active in research capacity building and provides research skills training, mentoring and has established a Primary Health Care Research network and a practice-based research network.



Dr Meredith Makeham receiving the "SPHCM all rounder" prize at the 2010 Showcase from the Dean, Prof Peter Smith

EXAMPLES OF CURRENT PROJECTS

Quit in General Practice. A randomised trial of enhanced in-practice support for smoking cessation. NHMRC Project Grant 2009-2011. Nick Zwar, Robyn Richmond, Elizabeth Halcomb, John Furler, Julie Smith, Ron Borland. This study is evaluating the role of general practice nurses in providing support for smoking cessation. This innovative intervention is being compared to Quitline referral by the GP and to usual care in a three arm cluster randomised trial being conducted in both Sydney and Melbourne. This project has involved over 100 general practices and over 2200 patients. A related study being conducted by Dr Nicole Clancy is examining the experience of trying to quit for people with depression.

Early intervention in Chronic Obstructive Pulmonary Disease. NHMRC Project Grant 2010-2012. Nick Zwar, Sandy Middleton, Helen Reddel, Onno van Schayck, Sarah Dennis, Alan Crockett, Jeremy Bunker, Sanjyot Vagholkar, Teng Liaw. COPD is a common cause of death and disability in Australia but is often not diagnosed before there is substantial lung damage. This study is examining case finding by practice nurses and early intervention by practice nurse and GP teams.

Advanced care planning for end of life care. NHMRC PhD Fellowship. Joel Rhee is exploring how advanced care planning is conceptualised and implemented in Australia. The work is exploring the view of stakeholder organisations and clinicians involved in aged care and end of life care as well as the views of general practitioners and their patients. Supervisors are Prof Nick Zwar and Dr Lynn Kemp.

Overview

Health care reform and service innovation are the most pressing challenges to modern health care. Internationally, health systems struggle to keep up with demand, driven by modern technologies, changing consumer preferences and an ageing population, and are hindered by a diminishing workforce. Leading thinkers now see the radical reinvention of health care delivery, exploiting innovations in systems design and technology, as the only way of creating a health system that is sustainable and meets the needs and expectations of the community.

The Australian Institute of Health Innovation (AIHI) was established in 2007 within the Faculty of Medicine to address these pressing issues. AIHI is positioned as an international Institute of excellence in multidisciplinary research into the policy, organisation, management, technology, clinical care and systems science required to deliver high quality, safe, efficient and affordable health care in a range of settings. Its work strongly emphasises implementation and translational research.

The AIHI brings together four successful UNSW research Centres working in separate but related areas of clinical governance, clinical practice and health services research and health informatics. They are the:

- Centre for Clinical Governance Research in Health
- Centre for Health Informatics
- Centre for Health Systems and Safety Research
- Simpson Centre for Health Services Research.

The participating Centres provide the existing capacity for AIHI, and serve as a platform to create future capabilities to contribute innovative health solutions. This model allows individual Centres to maintain their existing identities while the Institute can leverage their combined expertise to achieve substantial gains in research funding and research outputs.

Currently there are over 100 staff, PhD students and visiting academics associated with the Centres which are located in the AGSM building on the Kensington Campus. Other colleagues from UNSW Faculties, Schools and Centres also collaborate with AIHI to contribute skills and expertise to the larger enterprise. These include research expertise within the Graduate School of Biomedical Engineering, the Australian

Business School, Westmead Hospital and St Vincent's Hospital. At its heart, AIHI addresses critical issues arising in current health systems that cannot effectively be addressed by single focus research Centres. Table 1 summarises the present research agenda that constitutes AIHI's platform.

TABLE 1: AIHI'S PRESENT RESEARCH AGENDA

FOCUS	EXEMPLAR RESEARCH INITIATIVES
Centre for Clinical Governance Research Director: Professor Jeffrey Braithwaite	
Improved governance; management; leadership and coordination of the health system.	Australia's most prominent and productive group in health systems research. Key research topics: accreditation; inter-professional learning; leadership; quality and safety; culture and structure; restructuring; and international health care policy issues.
Centre for Health Informatics Director: Professor Enrico Coiera	
The intelligent use of information and communication technologies to deliver high quality, safe, efficient and affordable health care.	Australia's largest academic health informatics research group. Key research topics: Centre researchers are working on consumer e-health systems, safety models and standards for IT in health care, clinical decision support, mining complex gene microarray, medical literature and medical record data, and building health system simulation methods to model the impact of health policy changes.
Centre for Health Systems and Safety Research Director: Professor Johanna Westbrook	
Evaluating and improving the safety and effectiveness of health care delivery with a focus on clinical work, communication processes and the effective use of information technologies.	The largest health informatics evaluation research team in Australia. Key research topics: Evaluation of complex health interventions and their impact on clinical effectiveness and safety. Medication safety; pathology and imaging informatics; the role of information technology in work practice innovation; communication processes in health care.
The Simpson Centre for Health Services Research Director: Professor Ken Hillman	
Developing and evaluating innovative health services and clinical practice interventions.	World-renowned research group on medical emergency teams and capabilities. Key research topics: Conducting the MERIT study, a cluster randomised controlled trial, which incorporates 23 hospitals across Australia; developing hospital-wide patient safety systems which have now been taken up in the majority of Australasian, North American and UK hospitals; pioneering day-of-surgery admissions in acute settings.

The Centre for Clinical Governance Research in Health (CCGR)



Research projects

The Centre has a number of current projects including:

- Enabling and promoting patient safety
- Developing and testing a sophisticated evaluation framework for communities of practice and social-professional networks
- Examining how practitioners use information and communication technologies in situ
- Doing an action research project to sociologically, organisationally and educationally engage clinicians, academics, and professionals bodies in inter-professional learning and practice
- Reviewing the organisational variables affecting clinical and organisational performance
- Promoting interprofessional learning in primary health care to encourage active patient self-management of chronic disease
- Improving quality of care through clinical governance in primary care
- Investigating the applicability of disaster theory to health care.

EXAMPLES OF CURRENT PHD RESEARCH TOPICS

- Patient safety practices in mental health services
- Social network influencers in complex networks
- Surveyors' influence in accreditation processes
- How surveyors bring ideas back to their host hospital
- Accreditation surveyors organisational change agents
- Consumers as participants in decision-making
- Curriculum mapping in medicine – how is it used?
- Interprofessional learning and overseas trained doctors
- Workarounds in health care.

The Centre for Health Informatics (CHI)



Research streams

The Centre conducts fundamental and applied research in the design, evaluation and application of decision-support technologies for healthcare and the biosciences. It has four main streams of research including:

- **Patient Safety Informatics:** Examining how health service delivery can be made safer through the effective use of IT.
- **Translational Bioinformatics:** Exploration of bioinformatics and computational biology tools, techniques and data in support of clinical decision-making.
- **Consumer Informatics:** Developing novel information technologies to support consumer decision-making and healthcare.
- **Modelling and Simulation in Health:** Using models to examine problems in cost, safety, sustainability and inadequate translation of evidence into practice and to re-invent the healthcare system by finding levers that drive dysfunction.

EXAMPLES OF CURRENT PHD RESEARCH TOPICS

- Designing safe communication systems to enhance clinical teamwork
- Understanding the impact of hospital context on the spread and control of MRSA through broad-scale systems simulation.
- Decision support for critical test result notification.
- Regulating health information technology to enhance patient safety.
- Using models to determine error sequences leading to adverse events and to identify redundancy for improving patient safety.

Centre for Health Systems and Safety Research



Research projects

Research areas of the CHSSR include:

- How information and communication technologies support innovations in health care delivery and practice
- Development and application of new observational techniques for measuring clinical work and communication practices
- Assessment of the effectiveness of electronic medication management systems to reduce medication administration and prescribing errors
- Impacts of online evidence systems on decision-making
- Pathology informatics
- Demonstration of the relationship between interruptions and errors
- Investigation of the extent of failure to follow-up diagnostic and radiology test results and the role of ICT in results management
- IT use in aged care
- Social network analysis of communication processes in health
- How organisation and team cultures influence information technology use and effectiveness in hospitals.

EXAMPLES OF CURRENT PHD RESEARCH TOPICS

- Use of information technology and the impact of mobile devices on clinical work practices
- Compliance with recommended prophylactic treatment for DVT among at risk medical patients in hospital
- Impact of information exchange between residential aged care facilities and pharmacies on residents' medication management
- Non-physician clinicians in the Emergency Department: an exploration of the impact of information communication technology in facilitating role change in the delivery of care.

The Simpson Centre for Health Services Research



Research Projects

The Centre has a number of current projects including:

- **End-of-Life Care:** The management of patients at the end-of-life is less than optimal and an increasing problem in our Society. The Simpson Centre is developing new systems in order to identify patients at the end-of-life and to institute improved care.
- **Emergency Medicine Research:** Looking at new models of care to provide a better quality of care and greater safety for patients presenting to the Emergency Department.
- **Discharge Programmes:** Evaluating systems to improve the patient's hospital journey and discharge process.
- **Early Intervention for at-risk Hospitalised Patients:** The concept of the Medical Emergency Team (MET) was first established in 1989 at Liverpool Hospital. It replaced the cardiac arrest team and has been shown to reduce mortality, cardiac arrests and other serious adverse patient events. The system has now been introduced in many countries around the world. The Simpson Centre has led much of the ground-breaking research conducted around this concept.
- The Simpson Centre is examining the disadvantages in health status between children from non-English speaking and Indigenous backgrounds.

EXAMPLES OF CURRENT PHD RESEARCH TOPICS

- Examining the health disadvantages of children from a non-English speaking and Indigenous population.
- Analysing current studies of end-of-life care and evaluating new models.

Overview

This is a leading centre in Australia for research in primary health care and equity. Our research is mainly applied, and we work closely with clinicians, health service organisations, non government organisations and government at all levels as research partners and to support the implementation of our findings in policy and practice. Our research has informed the development of policy on primary health care and equity at both national and state levels, including the current health reforms.

The Centre was formed in 2005, and includes a group on campus (in the AGSM building), the Centre for Health Equity Research Training and Evaluation (CHETRE) at Liverpool and works closely with the General Practice Unit at Fairfield. We have 30 full time equivalent staff and 14 PhD candidates. Our research budget for 2010 was \$3.6m and we produced 37 publications. The Centre is supported by a Capacity Building Infrastructure Grant from NSW Health.



SOME RECENT PHD TOPICS AT CPHCE

- Evaluation of health assistants in general practice
- Equity focused health impact assessment
- Do patient attitudes contribute to frequent admissions?
- Urban renewal and public housing: Impacts on public health
- Inter-organisational and interprofessional relationships and their impact on primary diabetes care
- Psychological distress and prevention of cardiovascular disease in general practice
- Cardiovascular risk assessment and prescribing in general practice
- Self management support for patients with chronic illness
- Physical activity and implementation of preventive care in general practice
- Improving the quality of care to Aboriginal and Torres Strait Islander patients who attend general practices in urban Sydney
- End of life decision making: advance care planning in the primary care context

Research programs

We have three streams of research, and also conduct a research capacity building program for primary health care practitioners.

Prevention and management of chronic disease

New approaches to preventing and managing chronic disease are being developed, with an increasing emphasis on high quality care within primary health care, particularly general practice. Within this stream there are three main programs of work: improving quality of care for chronic disease, organising chronic disease management, and preventing chronic disease.

Research includes projects addressing risk factor assessment and management in general practice and community health, team work in chronic disease management, the role of practice nurses in COPD, self management and health literacy, and a large partnership project on the implementation of guidelines to prevent chronic disease.

Our research has contributed to health policy including reports of National Preventative Health Task Force and National Primary Care Strategy.

RESEARCHER PROFILE

Elizabeth Denney-Wilson BN, MPH, PhD is a Research Fellow at the Centre for Primary Health Care and Equity, primarily involved in the prevention of chronic disease stream. Elizabeth managed the "Absolute Risk Trial" (ART), an NHMRC-funded study examining the impact of a novel method of assessing and managing cardiovascular risk involving over 1,000 patients. She has a particular interest in prevention and management of obesity across the lifespan, and was one of the founders of the Australasian Child and Adolescent Obesity Research Network (ACAORN). She is currently collaborating on obesity prevention projects with researchers at Deakin and Sydney Universities and leads a study aimed at increasing the capacity of Practice Nurses to offer obesity prevention as part of routine care. Elizabeth is also a keen teacher and mentor, providing clinical tutorials and small group facilitation in the undergraduate medical program as well as supervising research students.



Primary health care system development

Primary health care is a major focus of national health service reforms. Proposed changes are likely to open up new opportunities for more integrated and comprehensive care, and put greater emphasis on access to care. Our research provides evidence to shape and support these changes. We have two main areas of research: integration and collaboration, and access to primary health care.

Our research includes a study of access to primary health care for people with diabetes and the impact of best practice primary health care, a primary health care leadership program for staff in primary health care services, research into the development of integrated primary health care services and a Primary Health Care Research Unit supporting primary health care research in south western Sydney.

We also have a growing body of work in health informatics for primary health care and health services integration, including the consistency of records between hospitals and primary health care, and the development of an electronic practice based research network.

Understanding health inequalities and intervening to reduce them

Equity is a basic value of the Australian and NSW Health systems. We are interested in equity both in access to health services and in health outcomes. In Australia there are many significant inequities in health relating to location or family background, employment, income and level of education. Our focus is on gaining a greater understanding of the causes of inequity in health and what can be done to reduce it.

There are three main program areas within this research theme: early childhood, disadvantaged communities and populations, and equity and healthy public policy (including Health Impact Assessment). Current research includes an RCT of sustained early childhood home visiting, a cohort study of Aboriginal children born in Campbelltown Hospital (now in their first year at school), a ten year evaluation of a community regeneration intervention in Miller, and a major program of health impact assessments (HIA). We have also completed an intervention to improve the physical and mental health of people who are unemployed and are developing resources for those working in this area.

Research capacity building initiative (RCBI)

This program supports the development of research capacity in primary health care. It focuses on building a sustainable primary health care workforce as well as supporting high quality research. The program is part of a NSW capacity building network and is active across South West Sydney, Southern and South Eastern Sydney and parts of Western Sydney. The RCBI is funded by the Department of Health and Ageing.

The Primary Health Care Research Network (PHReNet) is integral to work of the capacity building stream. This provides information and support to general practitioners, staff of Divisions of General Practice, and community and allied health professionals. PHReNet currently has over 300 members and offers education in basic research skills, mentoring and support for early career researchers, research seminars, an Evidence Based Practice journal club, and writing support groups. We also have a practice based research network, PHReNet-GP, established in 2007 to streamline and encourage GP participation in CPHCE projects with more than 50 GP members.

For further information please see our website:
www.cphce.unsw.edu.au

Overview

The Kirby Institute for infection and immunity in society was formed on the 25th anniversary of the establishment of the National Centre in HIV Epidemiology and Clinical Research (NCHECR). Named for former High Court judge Michael Kirby AC, the Kirby Institute now fulfils a much broader role than was first imagined in 1986 when the three National Centres in HIV research were formed in response to the then-emerging and little understood HIV pandemic. NCHECR collaborated extensively in the international effort that ensured that HIV became one of the most intensively studied diseases in the history of medical science. Over time, the skills, techniques and expertise developed in the study of HIV were applied to a range of other infectious diseases, notably viral hepatitis and sexually transmissible infections. The new name of the Kirby Institute takes in this broader scope and, reflecting Mr Kirby's lifelong interest in health and human rights, also reflects the diverse and often disadvantaged communities which form the client groups of our study.

The Kirby Institute is directly affiliated with the Faculty of Medicine at the University of New South Wales, and receives funding through the Australian Government Department of Health and Ageing. The Kirby Institute's primary functions relate to the co-ordination of national surveillance programs, clinical research and clinical trials. The Kirby Institute's research program has increasingly taken on a regional focus, with major collaborative programs in Thailand and Cambodia. Other functions of the Kirby Institute include the training of health professionals, and input into the development and implementation of health policy and programs.

The Kirby Institute carries out its functions by working with an extensive range of collaborators, including the other national HIV research centres, State and Territory Health Departments, public and private clinical units, national and international organisations, and the corporate sector including the pharmaceutical industry.

The Director is supported in the overall management of the Kirby Institute by the Executive Committee. Executive Committee members are the Heads of Kirby's eleven programs and groups, as well as the managers of Finance and Administration.



Mr Michael Kirby and Professor Fred Hilmer

Public health research programs

Program units at the National Centre include public health programs (including epidemiology and prevention research), clinical research, and laboratory research programs. The public health research programs are:

1. HIV Epidemiology and Prevention Program
2. Viral Hepatitis Epidemiology and Prevention Program
3. Sexual Health Program
4. Aboriginal and Torres Strait Islander Health Program
5. Public Health Interventions Research Group
6. The Surveillance and Evaluation Program for Public Health
7. Justice Health Research Program

1. HIV Epidemiology and Prevention Program (Andrew Grulich)

The HIV Epidemiology and Prevention Program (HEPP) conducts research into the transmission and prevention of HIV and sexually transmissible infections (STIs), and on the natural history of HIV. Our work is multidisciplinary and collaborative. We work in partnership with communities most affected by HIV, particularly the gay community and those people living with HIV. We work across the spectrum of

biomedical, behavioural and structural prevention, because effective HIV prevention acknowledges the complexities of everyday life for at-risk communities. Our work includes behavioural risk surveillance, studies of risk behaviour, and studies of use of biomedical preventive interventions. Researchers in HEPP conduct a range of work on the intersection of infection, immunity and cancer to inform our knowledge of how we might prevent cancer in people with HIV. A particular focus is the prevention of anal cancer in gay men.

2. Viral Hepatitis Epidemiology and Prevention Program (Lisa Maher)

The Viral Hepatitis Epidemiology and Prevention Program strives to conduct multidisciplinary public health research that is ethical, innovative and makes a difference. We are proud of, and committed to, working in partnership with affected communities in Australia and internationally to achieve our goals. Key aims of the program are to:

- Initiate and undertake epidemiological, social and behavioural research examining viral hepatitis and public health issues associated with drug use and risk behaviour;
- Design and implement trials of behavioural and biomedical prevention interventions designed to prevent viral hepatitis and other infectious diseases in vulnerable populations;
- Conduct and support surveillance activities including monitoring trends in blood-borne virus incidence, prevalence and risk behaviour among people who inject drugs;
- Translate research outcomes into evidence-based public health practice; and
- Build capacity for research, surveillance and harm reduction within Australia and the region through the provision of training and technical assistance.

3. Sexual Health Program (Basil Donovan)

The Sexual Health Program leads and participates in research into the epidemiology, surveillance, microbiology, clinical management, and prevention of sexually transmissible infections (STIs); including – but not limited to - chlamydia, syphilis, gonorrhoea, human papillomavirus infection, herpes simplex virus infection, and HIV infection. Our program is also involved in research into the behaviour and sexual health of priority populations for STI control such as youth, gay men, sex workers, Aboriginal people, prisoners, and travellers.



Professor David Cooper and Mr Michael Kirby

The Sexual Health Program works closely with several other Programs within the Kirby Institute. The Program also enjoys collaborating with a national network of 25 specialist sexual health services; research laboratories in Sydney, Melbourne, Brisbane and PNG; the School of Population Health at the University of Melbourne; the Burnet Institute in Melbourne; and the Menzies School of Health Research.

Methodologies used in the Program's research range from descriptive epidemiology with novel analytical techniques, molecular epidemiology, enhanced surveillance strategies, data linkage studies, social and behavioural research, test evaluations, detecting antimicrobial resistance, evaluating and improving health care delivery, legal and policy research, anthropology, and biomedical prevention.

4. Aboriginal and Torres Strait Islander Health Program (James Ward)

The Aboriginal and Torres Strait Islander Health Program was established at NCHECR in 2007. The Program works collaboratively across sectors to close the gap in health disparity between Aboriginal and Torres Strait Islander and non-Indigenous people, with a key focus upon sexual health and blood borne viruses.

The overall objective of the Program is to enhance the capacity of Aboriginal and Torres Strait Islander communities in responding to STIs, HIV and viral hepatitis. This objective is accomplished by working effectively to improve sexual health and BBV health outcomes for Aboriginal and Torres Strait Islander people in Australia by conducting rigorous, ethical, timely and culturally appropriate research.

The program has four main domains of activity that aim to increase the level of Sexual Health and BBV knowledge within Aboriginal and Torres Strait Islander communities.

1. **Research:** To conduct research in partnership with Aboriginal and Torres Strait Islander communities in the areas of STIs, HIV/AIDS and other BBVs.
2. **Surveillance:** To support existing surveillance activities and to identify innovative new areas and methods of surveillance that will benefit Aboriginal and Torres Strait Islander communities.
3. **Capacity Building:** To work with existing health services to enhance the capacity of existing systems and workforces in the areas of sexual health and BBV service delivery; research; and surveillance.
4. **Information dissemination** through the development of a comprehensive clearinghouse of Aboriginal and Torres Strait Islander Sexual Health initiatives including surveillance and research

The Program works closely with the National Aboriginal Community Controlled Health Organisation, its State and Territory based Affiliate organisations and Aboriginal Community Controlled Health Services to make a difference to the health of indigenous communities.

5. Public Health Interventions Research Group (John Kaldor)

The Public Health Interventions Research Group undertakes a diverse range of projects that focus on the evaluation of strategies to prevent infectious disease. We collaborate extensively within NCHCCR and externally, and emphasise research that benefits the health of disadvantaged populations in Australia and the Asia-Pacific Region. Much of our work also has a strong capacity building component. The group is currently involved in projects related to the control of HIV, sexually transmitted infections, viral hepatitis, tuberculosis, scabies and trachoma. Countries of activity include Australia, Papua Guinea, Indonesia, Cambodia and Fiji.

6. The Surveillance and Evaluation Program for Public Health (David Wilson)

The Surveillance and Evaluation Program for Public Health (SEPPH) monitors the pattern of transmission of HIV, viral hepatitis, and specific sexually transmissible infections in Australia, assesses past and expected epidemic trends, and evaluates the epidemiological impact and cost-effectiveness of public health intervention strategies and programs. SEPPH also evaluates HIV epidemics and develops research capacity in Southeast Asia and the Pacific.

Surveillance activities are conducted in collaboration with the Australian Commonwealth Government Department of

Health and Ageing, State and Territory health authorities and collaborating networks. Analyses and interpretation of recent trends in new diagnoses of HIV, viral hepatitis and STIs, and estimates of prevalence and incidence in key population subgroups are published in our Annual Surveillance Report. Public release datasets on new HIV and AIDS diagnoses are also available for download. SEPPH, of the National Centre in HIV Epidemiology and Clinical Research, is a collaborating unit of the Australian Institute of Health and Welfare.

SEPPH carries out extensive mathematical modelling research in order to evaluate public health programs, understand drivers of epidemic trends, project future epidemic trajectories, and assess the potential impact of public health strategies. This research is focused on HIV, viral hepatitis, and sexually transmissible infections in Australian populations and on HIV/AIDS in the Southeast Asia and Pacific region. This evaluation is often extended to health economic analyses of different programs or interventions.

SEPPH is also involved in building research capacity in the areas of epidemiology, biostatistics, mathematical modelling, and other biomedical research associated with HIV/AIDS in Southeast Asia and the Pacific.

7. Justice Health Research Program (Tony Butler)

The Justice Health Program is the most recently established research program in the Kirby Institute. Offender populations are one of the most stigmatised and socially excluded groups in the community and characterised by extreme social and psychological disadvantage. Those exposed to the criminal justice system are typically poorly educated, unemployed, socially isolated, and financially dependent. Epidemiological surveys of prisoners consistently find high level of physical ill health, psychiatric illness, high rates of blood borne and sexually transmitted infections, and substance misuse. Indigenous Australians are disproportionately over represented in the criminal justice system and form an important part of the work of the Justice Health program.

The work of the Justice Health research program is multi-faceted covering blood-borne virus and STIs surveillance in prison in the form of the National Prison Entrants' Bloodborne Virus and Risk Behaviour Survey, an investigation into why prisoners have rates of hepatitis C treatment, tobacco use among prisoners, an intervention to treat impulsivity in repeat violent offenders, and the development of national health indicators for prisoners. An NHMRC capacity building grant in the Indigenous offender health area is helping to develop a cohort of Aboriginal researchers in this area.

RECENT PUBLIC HEALTH FUNDING SUCCESS AT THE KIRBY INSTITUTE

John Kaldor, David Wilson, James Ward and Bette Liu won a tender with the Department of Health and Ageing to undertake national trachoma surveillance to 2013.

Andrew Vallely, John Kaldor, Angela Kelly, Peter Siba (PNG IMR), Lisa Fitzgerald (UQ), Maxine Whittaker (UQ) were recently awarded a grant from the PNG National AIDS Council Secretariat (2010 - 2013; AUD 259,150) to undertake a qualitative longitudinal study to investigate constructions of masculinity, sexuality and agency among male youth in Papua New Guinea.

Andrew Vallely was awarded an NHMRC Training Fellowship in 2010 to support his research in HIV/STI prevention and sexual health in Melanesia.

Andrew Vallely, Claire Ryan (PNG IMR/Burnet Institute), John Kaldor, Peter Siba (PNG IMR) and collaborators in Papua New Guinea were awarded funding in 2011 through the PNG IMR Internal Competitive Research Award Scheme (2011-2012; AUD 60,000) to investigate human papillomavirus (HPV) infection among women attending sexual health clinics in Goroka and Port Moresby, Papua New Guinea.

Claire Ryan (PNG IMR/Burnet Institute), Andrew Vallely, John Kaldor, Peter Siba (PNG IMR) and collaborators in Papua New Guinea received funding from the PNG Partnerships in Health Program in 2011 (2011-2012; AUD 293,988) to investigate the epidemiology of HIV and STIs, including human papillomavirus (HPV), among pregnant women attending antenatal clinics at four sites in Papua New Guinea.

Claire Ryan (PNG IMR/Burnet Institute) Andrew Vallely, John Kaldor, Peter Siba (PNG IMR) and collaborators in Papua New Guinea received funding in 2010 from the PNG National AIDS Council Secretariat (NACS; 2011 – 2012; AUD 41,250) to investigate the relationship between HIV-1 and HSV-2 in the Highlands of Papua New Guinea.

The Aboriginal and Torres Strait Islander Health Program recently received funding to evaluate two major projects funded under the National Partnership Agreement Indigenous Health, namely a sexual and reproductive health program and a hepatitis C program. The program will be rolled out in communities across NSW 2011-2014.

Lisa Fitzgerald (UQ), Andrea Whittaker (UQ), Andrew Vallely and collaborators in Queensland received ARC funding (LP110200318; 2011 – 2014; AUD 191,059) for a qualitative longitudinal study of aging, place and social isolation to be conducted among people living positive in Queensland.

Andrew Grulich and collaborators were awarded a NHMRC project grant for \$1,350,000 for the years 2011-2015 for a project entitled "Viral load, HIV treatment, and HIV transmission in serodiscordant male homosexual couples".

Rebecca Guy, Larissa Lewis, Handan Wand, John Kaldor, Basil Donovan, and collaborators have received a grant from the NSW Health Department (2011-2012) for the eTEST project – an initiative to increase HIV/STI testing in gay men attending GP clinics in NSW.

Rebecca Guy, James Ward, David Whiley (UQ), Basil Donovan, David Wilson, Davis Regan, and Handan Wand received NHMRC Project funding (2011-2013) for a randomized trial of rapid point-of-care tests for chlamydia and gonorrhoea in remote Aboriginal communities.

Rebecca Guy, Donovan B, John Kaldor, Matthew Law, and David Regan, with collaborators from the University of Melbourne and the University of Bern, received NHMRC Project funding (2011-2013) for a randomized controlled trial to evaluate the effectiveness and cost-effectiveness of chlamydia testing in general practice (ACCEPT).

Overview

The National Drug and Alcohol Research Centre (NDARC) is a premier research institution in Australia and is recognised internationally as a Research Centre of Excellence. The Centre currently has just over \$62 million in competitive grants, Government funding, academic awards and fellowships. The overall mission of the Centre is to conduct high quality research and related activities to increase the effectiveness of prevention, treatment and other intervention responses to alcohol and other drug related harm in Australia and internationally.

The Centre is fast growing, with 31 academic staff, 41 research staff, 19 support staff, 18 currently enrolled PhD students and one MPhil Student. NDARC's wide range of academic and technical expertise includes: public health; epidemiology, psychology, biostatistical analysis, economics, criminology and policy analysis.

The major research priorities for NDARC are:

- Treatment and other interventions;
- Patterns of alcohol and drug use and related harms;
- Prevention and early intervention;
- Drug market analysis and drug policy.

As well we have significant programs in:

- Criminal justice system;
- Health economics;
- Indigenous communities;
- Global health.

Collaborators

NDARC collaborates with other departments and research centres within the UNSW Faculty of Medicine, schools within UNSW, including psychology and social work, and a range of universities, institutes and individuals. Its sister institute is the National Drug Research Institute (NDRI) at Curtin University of Technology in Perth. Its overseas collaborators

include the World Health Organization (WHO), United Nations Office on Drugs and Crime (UNODC), the Joint United Nations Program on HIV/AIDS (UNAIDS), European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) and the London School of Hygiene and Tropical Medicine (LSHTM).

Research priorities

Patterns of drug use and related harms

Current projects that involve the study of the distribution and determinants of substance use include the assessment of the magnitude and outcomes of alcohol and other drugs in pregnancy; identification of the health and psychological

NATIONAL CANNABIS PREVENTION AND INFORMATION CENTRE

This consortium brings together a wide range of national and internationally renowned researchers, clinicians and policy makers across the drug and alcohol, mental health and criminal justice sectors with the broad aim of developing, synthesising and disseminating cannabis-related research to inform service delivery and the general community. The Centre fulfils these aims by offering services to a range of target audiences. These include a comprehensive website providing cannabis information to the community, users, their families and the various workforces involved in the delivery of cannabis related interventions (www.ncpic.org.au); a free national Cannabis Information and Helpline (1800 304050); a community communications program that works directly with the community and schools to develop effective strategies to disseminate evidence-based information; free national training on the delivery of motivational and brief interventions for cannabis-related problems among adolescents and adults; a variety of projects to inform service delivery such as the first clinical guidelines for the management of cannabis use disorder, the development of exploration of new models of delivering interventions via telephone, web and post and a valid and reliable measure of cannabis withdrawal for clinical services.

consequences of ecstasy use; and using epidemiology to develop models of the typology of mental disorders in order to better inform psychiatric disease classification.

Significant projects that examine the patterns and indicators of the health, psychosocial and economic harms associated with alcohol and drug use include:

- a longitudinal birth cohort study of 2,000 families examining the impact of parental substance use, particularly alcohol, on infant development and family functioning;
- the parental supply of alcohol study which will investigate the influence on teenagers' long term drinking trajectories;
- the prevalence of Attention Deficit Hyperactivity Disorder (ADHD) among illicit psychostimulant users.

Key ongoing programs under the auspices of NDARC's Drug Trends Team include the National Illicit Drug Indicators Project (NIDIP) that is investigating trends over time in drug-related harms of both illicit and prescription drugs. This complements the national drug monitoring programs that are co-ordinated by NDARC: the Illicit Drug Reporting System (IDRS) and the Ecstasy and Related Drugs Reporting System (EDRS).

The Cannabis Research Consortium involves partners in capacity building activities to facilitate research investigating the relationship between cannabis use, dependence, and mental health and associated outcomes in adolescence and young adulthood.

Prevention and early intervention

This priority relates to the importance of enhancing protective factors and reversing or reducing risk factors affecting patterns of alcohol and other drug use. A five year project, the Alcohol Action in Rural Communities (AARC), was completed this year. The randomised community trial, the largest of its type anywhere in the world, aimed at reducing alcohol related harms in community settings and includes cost-benefit analysis of community action intervention strategies.

NDARC also runs an indigenous community research program aimed at reducing alcohol related harms among indigenous Australians. Current projects include delivery and evaluation of a family based intervention for reducing alcohol related harms in indigenous communities and delivery and evaluation of alcohol screening and brief intervention in Aboriginal community controlled health services.

INTERNATIONAL PROGRAMS AND GLOBAL HEALTH

NDARC's longstanding involvement in international research and global health is formally recognised through its Collaborating Centre status with the World Health Organization (WHO). Through various projects the Centre also has strong links with the United Nations Office of Drugs and Crime (UNODC) and the Joint United



Nations Program on HIV/AIDS (UNAIDS). NDARC also runs a Program of international Research and Training (PIRT) that works on a range of issues encompassing licit and illicit drug use and related harms. The geographical focus of this work is the Asia-Pacific region. Particular areas of specialisation include:

- HIV prevention for injecting drug users
- methadone maintenance treatment in community and prison settings
- HIV prevention in prisons and other closed settings

Many of NDARC's international projects involve building capacity in the Asia Pacific region, but also in other parts of the world including Iran where NDARC, under Professor Kate Dolan, has established and evaluated a world-first clinic for female injecting drug users. Another notable project is the Opening Doors project which has focussed on increasing access to youth friendly harm reduction services in Thailand, China and Nepal (see picture).

A team based at NDARC has produced modelling for the Global Burden of Disease, Injuries and Risk Factors Study (GBD Study) for the past four years and is collecting data on mortality and disability from the following drug groups: heroin and other opiates, amphetamine type substances, cocaine, cannabis and benzodiazepines. Prevalence, incidence and disability associated with use, abuse and dependence of these substances by region is also being collected.

This year the Centre began a five year NHMRC- funded trial, the CAP trial, aimed at preventing the development of alcohol and drug related problems among Australian adolescents. The program will assess the effectiveness of combining universal schools based drug and alcohol prevention programs, which have been effectively developed and evaluated under the CLIMATE schools program, with an innovative UK - developed targeted intervention. The targeted programs tailor interventions to different personality types - anxiety sensitivity, negative thinking, sensation seeking and impulsivity.

Treatment and other intervention

Increasing the effectiveness and efficiency of alcohol and other drug programs is a key component of NDARC's research strategy. These studies develop and evaluate interventions including harm reduction programs, maintenance and other pharmacotherapies, withdrawal management, psychological interventions and long- term abstinence-oriented residential programs.

Increasingly the Centre is building up its capacity in the development, delivery and assessment of internet-based interventions for drug and alcohol treatment. These include: Youth SHADE; CAP; alcohol monitoring and a brief intervention for post traumatic stress disorder.

The National Cannabis Prevention and Information Centre (NCPIC) is also running a number of web-based programs for cannabis use.

Drug policy

A major part of the overall mission of NDARC is to provide an evidence base to support Australia's drug policy and a specific program at NDARC - the Drug Policy Modelling Program (DPMP) - has been established to create valuable new drug policy insights, ideas and interventions. DPMP explores dynamic interactions between law enforcement, prevention, treatment and harm reduction. It also integrates research and policy practice, examines national, state and local levels of policy making, and uses new methods and tools. Current DPMP projects include: assessment of the relative cost effectiveness of different types of law enforcement interventions directed towards methamphetamine; assessment of the economic consequences of cannabis policy options; socio-demographics and drug use; the impact of alcohol pricing on young peoples' drinking patterns and consumption of illicit drugs; public opinion, the media and illicit drugs policy.

Dissemination and Training

NDARC researchers have a strong record of contribution to scientific journals and other publications. As well, a central component of NDARC's role is the dissemination of information and the results of evidence based research and reviews. Key activities supporting this includes special conferences and educational workshops, a comprehensive media communications strategy, which incorporates mainstream media as well as new media and online communications, and an Annual Research Symposium. NDARC produces its own Research Monographs and Technical Report Series. NDARC produces a quarterly newsletter, CentreLines - in conjunction with NDRI - that is circulated to national research centres and other researchers and workers in the alcohol and other drugs field.

DR TIMOTHY SLADE

Senior Lecturer at the National Drug and Alcohol Research Centre

Dr Slade is a Senior Research Fellow providing biostatistical advice to staff and students at NDARC. He was the 2010 winner of NDARC's Ian Webster Award for Research Excellence.



"Given that accurate diagnosis and classification are the cornerstone of medical science much of my research aims to identify ways in which we can ensure that our psychiatric classification systems are performing validly and reliably," says Dr Slade.

Among his many projects, he supervises the NDARC arm of a large multi-centre NHMRC project grant examining the contribution of epidemiological data to the revision of psychiatric and substance use classification systems. This has included evaluation of the DSM-5 alcohol use disorder diagnostic criteria.

He is also chief investigator on an NHMRC- funded project that seeks to determine whether the high prevalence of alcohol use disorders in young people is a youthful epidemic or the result of biases introduced by the way alcohol use disorders are assessed.

KEYNOTE ADDRESS

DR TOM CALMA

Dr Calma is an Aboriginal elder from the Kungarakan tribal group and the Iwaidja tribal group whose traditional lands are south west of Darwin and on the Coburg Peninsula in the Northern Territory. He has been involved in Indigenous affairs at a local, state and national level and has worked in the public sector for over 38 years.



He has been actively involved in the formation of the Close The Gap for Indigenous Health Equality Campaign and the National Congress of Australia's First Peoples. He delivered the 2009 Mabo Oration; has continued to advocate for members of the Stolen Generations; and delivered the formal response in Parliament House on their behalf to the Prime Minister's National Apology.

In 2007 Dr Calma was named by Bulletin Magazine as the Most Influential Indigenous Person in Australia. In 2008 he received an award from GQ Magazine after being named GQ Magazine's 2008 Man of Inspiration for his work in Indigenous Affairs and in 2010 was named by Australia Doctor Magazine as one of the 50 most Influential people in medicine in Australia.

Dr Calma is the National Coordinator, Tackling Indigenous Smoking, a \$100+ mil federal government funded initiative, and holds Honorary Doctorates from Charles Darwin and Curtin universities. His current work is broad-ranging with an emphasis on rural and remote health and economic development, Indigenous health and university sector governance.

Life expectancy is not the only gap that needs to be closed

DR TOM CALMA

Providing a sound evidence base is critical to closing the gap between the physical and mental health enjoyed by Aboriginal and Torres Strait Islander and non-Indigenous Australians. However, in many instances it has proved inappropriate to simply apply the evidence base for securing health improvements in the general population to Aboriginal and Torres Strait Islander population groups. This is particularly so in relation to Indigenous mental health and social and emotional well-being where cultural and experiential differences between the two groups must be accounted for.

Fresh research is often required to provide a relevant evidence base but gathering this has proven problematic and raised fundamental questions about the nature of research and who controls the research agenda.

Looking forward, Dr Calma discusses the importance of equal partnerships in Indigenous health research as critical to enabling Aboriginal and Torres Strait Islander people to determine the solutions to close the gap on many physical and mental/SEWB health issues.

Through partnership, Dr Calma argues, Aboriginal and Torres Strait Islander people can control and determine the Indigenous health research agenda at all levels.

ABSTRACTS

SESSION 1A: HEALTH INEQUALITY - GALLERY ONE

Overview of Indigenous health world wide: The World Health Report 2010 - Prof Lisa Jackson Pulver

Ongoing health inequity for Aboriginal people through research - James Ward

The Gudaga Study: Descriptive research informing delivery of health services for urban Aboriginal infants and their mothers - Dr Rebekah Grace

Do the developmental trajectories of health, social wellbeing and learning outcomes vary between Indigenous and non-Indigenous Australian infants? - Dr Jack Chen

SESSION 1B: CLINICAL TRIALS - GALLERY TWO

The impact of a community action RCT in reducing alcohol-related harm: The Alcohol Action in Rural Communities (AARC) project - A/Prof Anthony Shakeshaft

Cardiovascular risk assessment - Dr Elizabeth Denney Wilson

Reducing smoking among male prisoners - Prof Robyn Richmond

Reducing impulsivity in repeat violent offenders using a selective serotonin reuptake inhibitor (Sertraline) - Pilot study results - Prof Tony Butler

SESSION 2A: GLOBAL HEALTH - GALLERY ONE

Is the tail wagging the dog or the dog wagging the tail? Are infection control programs in high resourced healthcare systems equitable or realistic for our lower resourced neighbours? - Prof Mary-Louise Mclaws

Decriminalising illicit drug use in Portugal: Impacts on prevalence and patterns of illicit drug use - Dr Caitlin Hughes

Mortality trends in Fiji - Prof Richard Taylor

Authorship placing as a measure of capacity building in health research - Skye McGregor

SESSION 2B: APPLIED TRANSLATIONAL RESEARCH - GALLERY TWO

Implementation of chronic disease prevention guidelines in Australian general practice - Prof Mark Harris

Using routinely-collected electronic data from the ePBRN: Quality, methods and ontologies - Jane Taggart

Does HIV treatment reduce HIV transmission in gay men? - Prof Andrew Grulich

Hammond Chair of Positive Ageing and Care: Vision for research 2011-2015 - A/Prof Chris Poulos

SESSION 3A: COHORT AND DATA LINKAGE - GALLERY ONE

A women's drug clinic in Iran: Improvements in drug use, social functioning and low HIV / HCV seroincidence - Prof Kate Dolan

Continuing declines in genital warts in young women and heterosexual men: Population effects of the national quadrivalent HPV vaccination in Australia, 2004-2010 - Prof Basil Donovan

Use patterns and harms: People who inject drugs and regular Ecstasy users providing an evidence-base for policy - Laura Scott

Relationship between clinical control of diabetes and hospitalisation for general practice patients with diabetes: A data linkage study - A/Prof Elizabeth Comino

SESSION 3B: QUALITATIVE AND MIXED METHODS - GALLERY TWO

Effective media advocacy strategies for quality and safety professionals - Dr David Greenfield

The acceptability of a family based alcohol intervention to Indigenous clients of a rural Aboriginal Community Controlled Health Service and Drug and Alcohol treatment agency - Bianca Calabria

Healthy.me: Impact of a web-based personally controlled health management system on healthcare consumers – preliminary results from three studies - Dr Annie Lau

Perceived prescribing competency and acceptance of a computerised provider over entry system - Dr Melissa Baysari

SESSION 4A: STUDENT PRESENTATIONS: COHORT AND DATA LINKAGE - GALLERY ONE

Expected epidemiological impacts of introducing an HIV vaccine in Thailand: A model based analysis - Karen Schneider

Sex and drugs in inner-city Sydney: Sexual risk behaviours and barriers to safe sex among drug users assessing low-threshold primary healthcare - Md Mofizul Islam

Cardiovascular absolute risk assessment and prescribing: What do GPs do - Dr Sanjyot Vagholkar

How can evidence-based programming contribute to health equity? - Jacqueline Ramke

HIV/STI's amongst self-identified men who have sex with men in Angiang, Vietnam - Quang Duy Pham

SESSION 4B: STUDENT PRESENTATIONS: QUALITATIVE AND MIXED METHODS - GALLERY TWO

Patient decision-making in motor neurone disease care - Anne Hogden

Validation of a video game device for measuring fall-risk - Daniel Schoene

The production of patient safety in mental health care - Jennifer Plumb

A pilot study to investigate measurement of physical activity in the general practice team - Shona Dutton

Life expectancy in an eastern seaboard Aboriginal cohort - Bronwen Phillips

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Randomised control trial of a brief cannabis intervention delivered by telephone
- Peter Gates, Jan Copeland, Melissa Norberg, Erol Digiusto

Interventions to increase re-testing for repeat chlamydial infection: A systematic review and meta-analysis
- Rebecca Guy, Jane Hocking, Nicola Low, Hammad Ali, Heidi Bauer, Jenny Walker, Jeffrey Klausner, Basil Donovan, John Kaldor

An assessment method focussed on clinical collaborative competencies: What is its impact on learning? - Asela Olupeliyawa

Overview of current evidence for the possible aetiological role of human papillomavirus (HPV) in oesophageal squamous cell carcinoma - Surabhi Liyanage

Models to determine cascading of errors leading to adverse events: Improving patient safety in health care - Jason Thorne

Love patrol: Bringing the 'Tabu' into Pacific living rooms - Robyn Drysdale

Merging the National AIDS Registry and the National HIV Registry to establish a single yet complete National HIV Registry
- Tarana Lucky

HIV prevalence is rapidly increasing among men who have sex with men in China: A meta-analysis - Eric Chow

Precise methods to estimate HIV clinical service capacity are required for efficient HIV workforce planning:
An observational study - Kylie-Ann Mallitt

Selecting clinical computing hardware devices for hospital wards - Mirela Prgomet

Team characteristics, performance and human resource management: How are they associated in rehabilitation services?
- David Pereira

Mavens and bridges: The role of key players in ophthalmic networks - Janet Long

Hand hygiene compliance in a sample of tertiary and provincial health care facilities in Viet Nam - Sharon Salmon, Mary-Louise McLaws, Didler Pittet, Thu Le Thi Anh, Hung Nguyen Viet

Innovation in the emergency department: An exploration of the impact of information and communication technology in facilitating the role of nurse practitioners - Yu Jia Julie Li

SPEAKER ABSTRACTS

Overview of Indigenous health world wide: The World Health Report 2010

PROF LISA JACKSON PULVER

The year 2010 was notable for the recognition of Indigenous peoples globally with the publication of the first “State of the World’s Indigenous Peoples” report by the United Nations. This report exposed the harsh reality that the estimated 370 million Indigenous peoples resident in about 90 countries comprise 5% of the world’s population, but make up one third of the world’s poorest people. In addition to socio-economic disadvantage, Indigenous populations also face issues of violence and brutality, continued dispossession of land, disempowering policies and a host of human rights abuses.

Also in 2010, the WHO commissioned its first discussion paper to specifically focus on Indigenous people living in developed countries (Fourth World) for inclusion with its annual World Health Report. This paper, led by Muru Marri Indigenous Health Unit, highlighted the ongoing legacies of dispossession, disempowerment and unhealed trauma and grief underlying similar inequalities in health, inequities in service access and poor data quality in four of the world’s wealthiest countries, namely Australia, Aotearoa New Zealand, Canada and the United States.

Each of the four countries is active to varying extents in efforts to “close the gap” that starkly separate Indigenous health status from their non-Indigenous populations. This presentation will highlight the findings of these seminal reports and consider the understandings that have emerged in Muru Marri’s ongoing research and teaching initiatives in the School of Public Health and Community Medicine. The foundation of Muru Marri’s work is to contribute to the development, support and evaluation of programs, services and policies that work synergistically to empower individuals, families, the workforce and communities to achieve sustainable improvement in health and social outcomes with and for Aboriginal and Torres Strait Islander people.

Ongoing health inequity for Aboriginal people through research

JAMES WARD

Aboriginal and Torres Strait Islander people in Australia represent just over 2% of Australia’s total population, however are overrepresented in STI notifications representing 11% and 54% of all chlamydia and gonorrhoea notifications in 2009, where these are accurately reported for Indigenous status; with young people aged less than 25 and remote communities most affected. A similar scenario arises for viral hepatitis data where an estimated 16% and 8% of all Australian chronic hepatitis B and C notifications are among Indigenous people. The only anomaly in the area of STIs and BBVs, being HIV notifications; where the rate of diagnosis among Indigenous people has remained stable and similar to that of the non Indigenous population since its emergence in Australia. Sadly, despite the significant morbidity related to these conditions, they are largely bypassed in the current Close the Gap Agenda because of the urgent need to reduce early mortality among Indigenous Australians. In an attempt to address this and assist in closing the gap related to STI and BBV morbidity, the Kirby Institute’s Aboriginal and Torres Strait Islander Health Program is implementing a research program consisting of large-scale intervention based research studies, that are predominantly embedded in service delivery and have potential to make improvements in population health and or service delivery as the research is conducted.

Projects include STRIVE, the largest randomised clustered community trial attempted in Aboriginal Health in Australia, which aims to address long standing endemic rates of STI in 67 remote community clinics; GOANNA, the first ever national study of young Indigenous people examining knowledge, risk behaviours and health service access related to STIs and BBVs; REACCH an urban and regional Aboriginal Community Controlled Health Service network where clinical research is undertaken, with an aim of improving clinical guidelines in Aboriginal primary health care, as well as several large scale health service research projects with a focus on quality improvement initiatives as well as several identified at risk population health studies.

The Gudaga Study: Descriptive research informing delivery of health services for urban Aboriginal infants and their mothers

DR REBEKAH GRACE

There is a dearth of information on the health needs of Aboriginal people in urban environments. This paper will describe some health outcomes and service use of urban Aboriginal infants and their mothers and the role of these data in influencing service delivery.

Methods: The Gudaga Study is a longitudinal study of the health, development and service use of urban Aboriginal infants and children in south west Sydney. "Best practice" research methods are used: these are inclusive, flexible and accommodate the specific needs of participating mothers and children. These practices have resulted in exceptional retention rates over time (at aged 3½ years retention is 82%). Our project officer, a local Aboriginal mother, has nurtured strong levels of trust with the mothers. The research team has built strong and effective collaborations with major stakeholders in Aboriginal healthcare and Tharawal Aboriginal Corporation.

Findings: When compared to mothers of non-Aboriginal infants, Gudaga mothers were significantly younger (25.4 yrs compared to 28.4 yrs), less likely to be in a relationship (83.7% and 59.6% respectively), less likely to have completed Yr 10, and more likely to live in a disadvantaged suburb and smoke during pregnancy. Mothers of Aboriginal infants were more likely than mothers of non-Aboriginal infants to report psychosocial risk factors (1.6 and 0.9 risk factors respectively), and to report a history of mental health problems and domestic violence.

At birth, Aboriginal infants were also more significantly likely to have a birthweight less than 2,500g (9.0%) and gestational age less than 37 weeks (11.8%) than non-Aboriginal infants (4.8 and 5.8% respectively). Fewer mothers on Aboriginal infants initiated breastfeeding (75.2% compared to 64.7%). Among mothers of Aboriginal infants who initiated breastfeeding, 40% were no longer breastfeeding at 2-3 weeks after birth.

In the first few weeks following birth, the families of Aboriginal infants were less likely than their non-Aboriginal counterparts to receive a home visit from the area's child and family health nurse under the Universal Home Health Visiting program.

Conclusion: These results have highlighted the level of known disadvantage of Aboriginal families in an enumerated population. The Gudaga Study is unique in that it is located within a defined health region and is well placed to influence service delivery. These results were instrumental in the local health service direction of "Close the Gap" resources to the establishment of a sustained nurse home visiting program for all mothers of Aboriginal infants in its region. This Bulundidi Gudaga program will ensure mothers of Aboriginal infants receive appropriate care from the time they book into antenatal services until their child turns two years of age.

Do the developmental trajectories of health, social wellbeing and learning outcomes vary between Indigenous and non-Indigenous Australian infants?

DR JACK CHEN

Objectives: To evaluate the developmental trajectories of health, social wellbeing and learning outcomes of Australian infants (0-5 years) and its determinants.

Methods: Our data included 5107 Australian infants cohort (0-5 years) from the Longitudinal Study of Australian Children (LSAC). We explored the three parallel developmental trajectories of health, social wellbeing and learning outcomes of the infant over a six-year period. We adopted a Latent Mixture Growth Modelling approach in exploring the three developmental trajectories and its dependence on Aboriginality, gender, family's social economic position (SEP) and mother's marital status.

Results: We identified three distinctive classes of developmental trajectories among Australian infants. The first class consisted of 90.5% of the study sample, who mostly had better baseline and stable following outcome performances. The second group (7.5%) has showed a rapid improvement of health outcome from a relatively poor baseline performance. It also showed relatively stable trends of social wellbeing and learning outcomes. Indigenous infants were more likely to be in this group than their non-Indigenous counterparts. The smallest class (2.0%) showed rapid deterioration of health outcome, with worsening social wellbeing and learning outcomes to a lesser extent. The members of this group are uniquely non-Indigenous and English-speaking infants with poor parental SEP, highly likely being with a single mother and more likely to be a boy.

Conclusions: The greater improvement of Indigenous infants' health during the study period suggested the encouraging sign of the effect of the national- wide efforts in closing the health gap. Such improvement is yet to be observed on other outcomes. The deteriorating of the three outcomes in a small proportion of the study sample called for urgent policy intervention to prevent them from the possible adverse effects over the life-course of these infants

The impact of a community action RCT in reducing alcohol-related harm: The Alcohol Action in Rural Communities (AARC) project

A/PROF ANTHONY SHAKESHAF

Introduction and aims: Of 26 community-based alcohol intervention trials published between 1980 and 2006, the largest whole-of-community approach was conducted in the US, comprising six non-randomly allocated communities, and no studies reported on their costs. This paper presents the main findings of a community action alcohol intervention, comprising 20 communities in NSW, conducted between 2004 and 2010.

Design and methods: The design is a cluster RCT. Population-averaged GEE models estimate the impact of the interventions on multiple data sets (crime, hospitalisations, traffic crashes, self-reported consumption and harms) using cluster-level summary information, while adjusting for between cluster variance, first order auto-correlation within communities over time, individual community effects and seasonal variation. Although a cost-benefit analysis will be done, the results of that component of the project are yet to be finalised.

Results: Results are yet to be finalised (but will be by the time of the Symposium). Preliminary analyses show a number of outcomes that are statistically significant, of marginal statistical significant and not statistically significant.

Discussion and conclusions: This is the first cluster RCT undertaken in community alcohol intervention studies. Although conducted in regional NSW, it has direct applicability to any defined location, given measures were mostly based on routinely collected data. The main outcomes, and their implications will be discussed. Since cluster RCTs are expensive and logistically difficult, the merits of alternative designs will be examined, along with more effective use of routinely collected data in cost-benefit analysis.

Cardiovascular risk assessment

DR ELIZABETH DENNEY WILSON

Cardiovascular Absolute Risk (CVAR) assessment is a simple, yet comprehensive method of assessing a patient's probability of suffering a cardiovascular event over a five year period by recognising the compounding effect of multiple risk factors including smoking, high lipids and blood pressure, age and sex. Based on recommended guidelines, patients are then managed according to their CVAR rather than the traditional method of managing single risk factors.

This study, known as the Absolute Risk Trial (ART) enrolled 36 GPs from 34 practices in the Sydney Metropolitan Area. Over 1,000 patients completed a questionnaire that collected details of their SNAP risk factors, their readiness to change and basic information on their medical history and current medications. Patients completed a blood test (lipids and glucose) and a GP visit that included assessment of the Cardiovascular Absolute Risk (intervention group) or a health check (control group). Follow-up was achieved for over 85% of patients and only one GP withdrew from the study.

In the intervention group, moderate and high risk patients (those with a CVAR of greater than 10%) were significantly more likely to receive lifestyle advice (for nutrition and weight management) than patients in the control group. Modelling of medication management suggests that substantial over-prescribing of antihypertensives and lipid lowering drugs will occur if management decisions are based on single risk factors rather than CVAR.

We found that GP uptake of CVAR was mixed; some GPs found the software very useful for patient education and used it on patients outside of the trial and reported that they would continue using the software. Others found it too time consuming and not a good fit with their usual practice. Overcoming this type of objection by incorporating preventive care tools like CVAR into medical software and including reminders to offer preventive care is crucial for widespread adoption.

Reducing smoking among male prisoners

PROF ROBYN RICHMOND

Background: While public health tobacco control strategies have succeeded in lowering tobacco use in the Australian general population, smoking rates remain high in disadvantaged and marginalised populations. Prevalence of tobacco use is much higher among prisoners (80%), those with a mental illness (between 50% and 80%), Aboriginal Australians (55% for males and 30% among females) and illicit drug users (71%). Tobacco smoking poses the greatest burden on the health of Australians and is responsible for 12% of the total burden of disease in males and 7% in females.

Prisoners are a highly stigmatised group, characterised by poor educational attainment, unemployment, social isolation, interpersonal conflicts, financial dependence, high levels of medical and psychiatric ill health and substance abuse. Aborigines are grossly over-represented in the correctional system, representing 2% in the general population but 15% and 23% of the NSW and QLD prisoner populations.

Aim of the study: To reduce smoking among prisoners and to describe the extent of cardiovascular risk factors.

Methods: We conducted a randomised controlled trial among 425 male prisoners in 18 prisons in NSW and Queensland with follow up conducted in an additional 6 prisons. Prisoners were randomised to one of two study groups. They received a multicomponent smoking cessation intervention consisting of two individual sessions of brief cognitive behavioural therapy, booklet developed for the study called Breakfree, a calendar, nicotine replacement therapy and access to the Quitline. The treatment group received active Nortriptyline while the control group received the placebo. Main outcome measures were: point prevalence (not smoking in previous 7 days), continuous abstinence (not smoking since end of treatment) and reduction in smoking by 50%. Follow up was conducted at 3, 6 and 12 months following treatment.

Results: Prisoners' demographic and baseline use of tobacco were similar: 70% smoked 20 or more cigarettes per day; mean age was 33 years, average number of times incarcerated was 3.3 times. We found that 39% of prisoners had 3+ cardiovascular risk factors compared to 10% in a general community sample of most disadvantaged men of a similar age. Significantly more Aboriginal prisoners had 3+ cardiovascular risk factors than non-Aboriginal prisoners

(55% vs 36%) and were twice as likely to have 4+ risk factors (27% vs 12%).

Although there was a trend for the treatment group to have higher abstinence at 3 months (28% vs 20%), this difference had disappeared by 6 months (19% vs 14%) and 12 months (12% vs 15%).

Conclusions: Prisoners are at high risk for developing cardiovascular disease compared to even the most disadvantaged in the community and should be the focus of specific public health interventions. We report that adding Nortriptyline to a multicomponent smoking cessation intervention which includes the nicotine patch does not increase successful outcome.

Reducing impulsivity in repeat violent offenders using a selective serotonin reuptake inhibitor (Sertraline) - Pilot study results

PROF TONY BUTLER

Background: The link between impulsivity and offending is well established in the criminological literature. For example, violent offenders make significantly more impulsive choices and are more prone to reoffending than non-violent offenders.

Impulsive-aggression has consistently been associated with serotonergic dysfunction within the brain. Reduced levels of cerebrospinal-fluid concentrations of 5-hydroxyindoleacetic acid (5-HIAA), a metabolite of serotonin have been correlated with measures of aggression and impulsivity in animal and human studies. This has prompted the use of selective serotonin reuptake inhibitors (SSRIs) in those with behavioural problems (particularly aggression) in psychiatric settings. This presentation describes the results of a pilot study of an intervention using an SSRI conducted among impulsive-violent offenders in NSW, and the proposal to undertake a large randomised control trial of this intervention.

Methods: Between January and September 2008, 34 men were recruited at 3 NSW Local Courts by a nurse attached to the Statewide Community & Court Liaison Service. Recruitment was via a flyer in the courts or word-of-mouth. Those with histories of violent reoffending (at least 2 convictions for violence), scoring 70 or above on the Barratt Impulsiveness Scale, and deemed medically fit were administered sertraline (Zoloft) for 3 months.

Results: Of the 20 who completed the intervention, significant reductions in impulsivity (35%), anger (63%), assaultive behaviour (51%), irritability (45%), and depression (62%) were observed from baseline to 3 months. All of those who completed the intervention requested to be kept on the treatment post-trial under their own GP.

Conclusion: These findings are based on an open label pilot study and therefore caution is warranted. NHMRC funding has been obtained to undertake a placebo-controlled RCT in the NSW criminal justice system.

Is the tail wagging the dog or the dog wagging the tail? Are infection control programs in high resourced healthcare systems equitable or realistic for our lower resourced neighbours?

PROF MARY-LOUISE MCLAWS

On his second day as Ambassador to the USA, Mr Kim Beazley fell and required surgery and rehabilitation to repair patellar tendons in two knees in Washington costing more than AUD 38,270. This cost was nearly four times the equivalent treatment in Australia. The USA has the third highest public healthcare expenditure per capita in the world due to its high cost of medical care and there are many causes for the high costs, one being their patient safety efforts towards achieving zero-risk of healthcare associated infection (HAI). Expenses related to zero-risk efforts include intravascular catheter coatings, novel catheter locks, antibiotics, ongoing surveillance for healthcare associated infections, laboratory testing and so forth and so on. Infection control and associated activities towards zero-risk are similar in the three dominant regions for infection control, USA, the United Kingdom (UK) and Europe, and these activities set global standards for safety. The dominant infection control standards relies on sophisticated surveillance activities to measure the rates of endemic levels of multiple resistant microorganisms and molecular changes in the epidemiology of the microorganisms, bloodstream infections associated with inserted devices, ventilator associated pneumonias, surgical site infections and the causative microorganism etc. This 'outcome' driven surveillance requires trained infection control staff, computers and high level laboratory testing facilities. Infection control related 'processes' such as cleaning, disinfection and sterilisation of equipment, catheter care etc, are not usually publically reported because standardisation in many processes has resulted breaches in compliance being close to zero. Therefore, HAI rates are published as a patient safety measure for other healthcare systems to aspire to or learn to avoid.

Tourist and business travellers arriving in our Asian-Pacific neighbourhood are happy to enjoy the inexpensive accommodation, food and consumer purchases while bemoaning the lack of environmental and perceived infection control standards in the local public hospitals. Yet, how can our neighbouring countries provide low cost

business travel and tourism but produce high resourced infection control standards similar to ours? To achieve large gains in infection control and patient safety standards surely our Asia-Pacific neighbours need serious money for serious infrastructure? Before considering the answer, we must ask whether costly surveillance system to obtain HAI rates wags the dog or infection control process measurements wags the tail? Striving to achieve high infection control standards our Asia Pacific neighbours invariably look towards a high cost surveillance system that includes laboratory testing and daily audits to establish their infection rates. Rather, trend setters in infection control and advisors to our neighbours should be stressing the measurement of infection control "processes" are the cornerstone to patient safety.

The World Health Organization (WHO) addressed the pivotal cornerstone of infection control process by launching the First Global Challenge – Clean Care is Safer Care in 2009. This was a challenge for all levels of resourced healthcare settings, especially for those outside the three dominant regions. Given water shortage, poor water quality and poor supplies of soap and hand towels the WHO provided an inexpensive recipe for alcohol-based handrub (US 0.3-0.5 cents /100ml) that could be manufactured in a remote clinic. WHO will continue to launch other rudimentary patient safety process initiatives that are achievable globally achievable by all healthcare systems.

Before low and mixed resourced healthcare settings speed towards adopting costly 'outcome' driven programs infection control experts should consider the ethics of this approach. The implementation of infection control processes have many hurdles to clear before introducing surveillance for 'processes' let alone 'outcome' surveillance. Examples of challenges to infrastructure for infection control faced by healthcare setting in China, Indonesia, Vietnam, Vanuatu and Iran will be discussed.

Decriminalising illicit drug use in Portugal: Impacts on prevalence and patterns of illicit drug use

DR CAITLIN HUGHES

In June 2011 a group of international leaders including the former presidents of Columbia, Mexico, Brazil and Switzerland released a report (the Global Commission on Drug Policy, 2011), calling for an end to the criminalisation and punishment of people who use drugs, and replacement with the offer of health and treatment services. One model at the forefront of their recommendations was Portugal, a nation that on 1 July 2001 decriminalised the use, possession and acquisition of all illicit drugs. Yet, there remains considerable concern that adopting a reform such as this will incite new interest in illicit drug use and be to the detriment of the broader community.

This paper provides a brief overview of the model, outlining why the Portuguese model has garnered so much international attention. It then critically examines the impacts of the reform on the prevalence of illicit drug use amongst young people, adults and problematic drug users. Examining trends in the reform nation against trends from neighbouring Spain and Italy will demonstrate that ten years post reform there is evidence of only a small increase in recent drug use (that is the proportion of the population reporting use in the last 12 months). Equally importantly, the prevalence and frequency of use has declined amongst problematic drug users and amongst the population most likely to initiate illicit drug use (youth).

The findings indicate that decriminalising illicit drug use, possession and acquisition will not inevitably lead to a rampant increase in illicit drug use and that it may even assist governments to reduce net harm to the general community. Decriminalisation may therefore offer a model for other nations that wish to provide less punitive responses to illicit drug use.

Mortality trends in Fiji

PROF RICHARD TAYLOR

Objectives: Mortality level and cause of death trends are evaluated to chart the epidemiological transition in Fiji. Implications for current health policy are discussed.

Methods: Published data for infant mortality rate (IMR), life expectancy (LE) and causes of death for 1940-2008 were assessed for quality, and compared with mortality indices generated from recent Ministry of Health death recording. Trends in credible mortality estimates are compared with trends in proportional mortality for cause of death.

Results: IMR declined from 60 deaths (per 1000) in 1945 to below 20 by 2000. IMR for 2006-2008 is estimated at 18-20 deaths per 1000 live births. Excessive LE estimates arise by imputing from the IMR using inappropriate models. LE increased, but has been stable at 64 years for males and 69 years for females since the late 1980s and early 1990s respectively. Proportional mortality from diseases of the circulatory system has increased from around 20% in the 1960s to over 45%. Extensive variation in published mortality estimates was identified, including clearly incompatible ranges of IMR and LE.

Conclusions: Mortality decline has stagnated. Relatively low IMR and proportional mortality trends suggest this is largely due to chronic diseases (especially cardiovascular) in adults.

Implications: Reconciliation of mortality data in Fiji to reduce uncertainty is urgently needed. Fiji's health services and donor partners should place continued and increased emphasis on effective control strategies for cardiovascular disease.

Authorship placing as a measure of capacity building in health research

SKYE MCGREGOR

Introduction: "Capacity building" is used in international development to describe a transfer of skills from developed to developing countries to increase the ability of developing countries to carry out functions more independently. We aimed to assess individual capacity building in HIV research. Using journal authorship placing as an indicator of research capacity, we hypothesized that a change in developing country authorship placement over time would reflect changing research capacity.

Method: We reviewed 4721 HIV journal abstracts from the 39 World Bank classified low-income countries, for the period 2000-2009. We identified and reviewed 385 articles on cohort studies or RCTs. The country of origin for the first, second and last author, primary non-developing country partner and source of financial support were recorded.

Results: Over the period 2000-2009, 32% of first authors 45% of second authors and 17% of last authors were developing country researchers. The number of developing country authors increased in first (from 1 to 31), second (from 4 to 39) and last position (from 5 to 12). As a proportion of all articles, there was an increase from 20 to 34% in first authors but a decline in second (from 80 to 42%) and last authors (from 40 to 13%). The primary non-developing country partners were North American (60%) or UK/European (32%), with 2% from the Asia/Pacific. Similarly for developing country authors, primary non-developing country authors were mainly North American (56%) and UK/European (28%). Funding came mainly from developed country governments (56%), with philanthropic organizations contributing 8%, international organizations 6% and a mix of several sources 29% (with 6% of this including developing country government support).

Discussion: There needs to be a continued focus on national research capacity building, which will improve the ability of developing countries to conduct locally relevant, independent research, which informs national health priority setting.

PEP study: Implementation of chronic disease prevention guidelines in Australian general practice

PROF MARK HARRIS

Background/Purpose: Best practice guidelines from various professional bodies in Australia address behavioural and physiological risk factors for vascular disease. Despite their widespread dissemination they have not been systematically implemented across the population in the general practice setting.

Objectives: PEP is a large multi-phase study to develop and trial an intervention to improve the implementation of chronic disease prevention guidelines in general practice we sought to identify barriers and facilitators to guideline implementation.

Methods: In-depth interviews were conducted with key informants, patients and general practice staff. A medical record audit was conducted on 2409 patients from 6 general practices.

Findings: The interviews confirmed the importance of time constraints and workload as a barrier to implementation and the importance of openness to change and the attitudes and skills of providers. Guidelines complexity and user unfriendliness were important barriers. Key new themes to emerge included the importance of addressing the following:-

- Support for risk communication
- Addressing poor health literacy
- Perceived roles and responsibilities of different providers
- The organisation and capacity of the referral network
- Cultural differences between practice populations

Effective strategies for implementation included audit and feedback, outreach visits to practices and opinion leaders.

Implications for guideline developers/users: Our research confirms that the organisation and capacity of the practice and its staff and the characteristics of population served were important factors in the implementation of prevention guidelines..

Using routinely-collected electronic data from the ePBRN: Quality, methods and ontologies

JANE TAGGART

The UNSW electronic Practice Based Research Network (ePBRN) has recruited, installed software and established protocols in a number of pilot general practices. We have extracted, linked and managed routinely collected data from the participating GP information systems in a large data repository based in UNSW. The general practices varied in size, ranging up to 25K patients and 220K prescriptions in the 10 year period of data extraction. This presentation will discuss data quality, database management, statistical methods, novel ways to report the information, and the ontological approaches being developed to quality assure and manage large clinical data repositories for research and quality improvement purposes.

Does HIV treatment reduce HIV transmission in gay men?

PROF ANDREW GRULICH

Years of observational epidemiological research has provided evidence suggesting that HIV treatment, by reducing HIV viral load, may substantially reduce HIV transmission in HIV serodiscordant heterosexual couples. Recently, a multi-national randomised controlled trial of early versus deferred HIV therapy in such couples conclusively demonstrated that HIV treatment does decrease HIV transmission. Based on only 28 events, rates of transmission were decreased by 96% in those randomised to early treatment. This result has the potential to revolutionise our approach to HIV prevention in heterosexuals.

The Australian HIV epidemic remains predominantly concentrated in gay men. Can the result in heterosexuals be translated to gay men? Transmission by unprotected anal intercourse is around 15-times more efficient than by vaginal intercourse, so it is clear that the results cannot be directly translated. There are no completed studies in HIV serodiscordant gay male couples that would allow the calculation of the effect of HIV treatment on HIV transmission in gay men.

In this presentation, I will outline the design of a newly NHMRC-funded cohort study, the Opposites Attract study, which will examine the effect of HIV treatment on HIV transmission in gay men.

Hammond Chair of Positive Ageing and Care: Vision for research 2011 – 2015

A/PROF CHRISTOPHER POULOS

'Bringing a life course perspective to positive ageing and minimising disability'

This is a 'greenfield' academic position, located in a 'greenfield site', creating the opportunity to develop a research agenda aligned with the SPHCM and HammondCare – a large not for profit provider of high quality aged care, rehabilitation and dementia care across community, hospital and residential settings. This offers an ideal opportunity for collaborative projects, with UNSW as the academic leader and HammondCare the industry partner.

The new Clinical Training Centre at Hammondville is able to accommodate research staff and students in a spacious setting, accessible by public transport and with plenty of free parking.

Research themes will centre around positive ageing, with a focus on improving the health, independence and wellbeing of community dwelling older people, improving medical care in residential aged care facilities, and developing models of community-based rehabilitation and rehabilitation within the residential care setting.

Current research projects include a review of seating solutions for people with advanced dementia living in residential care, and the testing of the utility of a functional assessment scale administered via computer adaptive testing. Planned projects include the development of a model of rehabilitation within low level residential care; pertussis in older people; and a large project around the prescription of assistive technology for community dwelling older people and people with disability, investigating the role of consumer directed prescription and budget holding.

If you are interested in collaborative research or undertaking a research degree in this area, please contact me: c.poulos@unsw.edu.au

A women's drug clinic in Iran: Improvements in drug use, social functioning and low HIV / HCV seroincidence.

PROF KATE DOLAN

Background: In Iran, drug treatment services and research have focused on male drug users. So in 2007 we established a Women's Drug Clinic with methadone, sexual and general health care and NSP to improve the health of female drug users. We also aimed to build capacity among drug workers and researchers in Iran.

In general, information about women who use drugs comes from the West. Whether women in countries such as Iran will enter drug treatment and how they will respond is unknown.

The study aimed to monitor women in treatment. Women who came to the clinic were registered and assessed for methadone maintenance treatment. Women were interviewed and bled at baseline and follow up (F/U) six months later. Women had access to female staff comprising a social worker, a lawyer, a psychologist, a mid wife, doctor and nurses.

Of 97 clients, we enrolled 78 and F/U 40 women. Women had a mean age of 36 and had used drugs for a mean of 14 years. They had a moderate level of literacy (78%). Women usually smoked heroin (87%) or opium (69%). Less than a quarter had any prior experience of drug treatment. One quarter had injected and 50% had a regular sexual partner. Half had been imprisoned. The average dose was 67mg (R: 25 to 160 mg) and duration in MMT was 15 months. HIV prevalence was 5% and HCV was 24%.

At FU there were significant reductions in heroin use (63% to 13%; $p = 0.001$); mean ICD 10 scores (7.3 to 1.6; $p = 0.0001$) and Social Dysfunction (2.2 to 1.2; $p = 0.03$). Social functioning increased more for severely dependent users than for less dependent users ($F_{1,25} = 4.37$, $p = 0.04$, $N = 26$). Hepatitis C seroincidence was 7.1 per 100 person years. No one acquired HIV infection.

We provided the first picture of Iranian female drug users, their risk behaviours and how well they responded to MMT. Given the women's high level of opiate use and HIV risk behaviour, their entry into treatment should be facilitated to avert HIV transmission and to improve their lives.

Continuing declines in genital warts in young women and heterosexual men: Population effects of the national quadrivalent HPV vaccination in Australia, 2004-2010

PROF BASIL DONOVAN

Background: From mid-2007 Australia funded a universal free vaccination program for all females between 12 and 26 years, but not for men or for women who were older than 26 years. Vaccine coverage rates of ~80% were achieved for school-girls, though coverage was probably lower for young women in the community. To determine the population effect of the vaccine program we established a national surveillance network to measure trends in clinical presentations for genital warts.

Methods: Eight sexual health services dispersed around Australia provided data on all new patients between 2004 and 2010, including new diagnoses of genital warts, demographics, sexual behaviour, and HPV vaccination status (Lancet Inf Dis 2011;11:39).

Results: Among 134,939 new patients we identified 11,194 new cases of genital warts. Before the vaccination program there was no change in the proportion of women or heterosexual men diagnosed with genital warts. To the end of 2010 we detected a 73% decline in the proportion of young resident women diagnosed with genital warts (p -trend <0.0001). In contrast, a 25% decline in young non-resident women only approached significance (p -trend=0.06), and we could not detect any significant decline in genital warts among older women or men who have sex with men. Interestingly, the proportion of resident heterosexual men diagnosed with genital warts declined by 35% (p -trend <0.0001), particularly among younger men (44%). By 2010, 65% of resident women of free vaccine-eligible age reported prior HPV vaccination, approaching 80% in the youngest women.

Conclusion: The vaccination program is having a major impact on the incidence of genital warts in young Australian women, with some protection of heterosexual men resulting from herd immunity. These declines seem to be ongoing as the most highly vaccinated cohort that was vaccinated at school approaches its peak period for exposure to HPV.

Use patterns and harms: People who inject drugs and regular Ecstasy users providing an evidence-base for policy

LAURA SCOTT

The two key national surveillance systems in Australia the Illicit Drug Reporting System (IDRS) and the Ecstasy and Related Drugs Reporting System (EDRS) provide a source of evidence-based data on the trends in the dynamic Australian drug market. The systems methodology is comprised of three main components: 100 interviews in each capital city across Australia of a sentinel sample of drug users (people who inject drugs regularly for the IDRS and Regular Ecstasy Users for the EDRS) are conducted annually, 15 interviews of experts in the drug field (law and health personnel) and population indicator data sources (e.g. hospital admissions, overdose deaths, Australian crime commission data) are triangulated to assess and report on the Australian drug situation.

The primary component of these monitoring systems being the interviews with the users themselves annually, provides Australia with data rich information around patterns of drug use and harms that other (international) systems struggle to obtain. The IDRS having begun nationally in 2000 and the EDRS in 2003 can provide key historical trends in use and harms that have emerged over the previous decade up to now. Examples of important trends noted by the IDRS and EDRS over time are the heroin shortage, increased availability of opioid replacement therapies, changes in polydrug use, the injection of benzodiazepines (e.g. notably temazepam), injection of opioid medications such as morphine and oxycodone, and the rise of methamphetamine and currently cocaine and emerging psychoactive substances such as mephedrone.

These cohort monitoring systems remain critical to the Australian drug market, providing an evidence-base for policy makers to consult for possible change or maintenance of current drug policy. In the past, there have been instances, when celebrities/radio 'shock jocks' with axes to grind, drug deaths, media reports and popular public opinion have called for changes to be made in relation to policy regulating the drug market.

Relationship between clinical control of diabetes and hospitalisation for general practice patients with diabetes: A data linkage study

A/PROF ELIZABETH COMINO

Diabetes is considered to be an ambulatory care sensitive condition that can be effectively managed in community settings avoiding the need for hospitalisation. This study used data linkage to explore the relationships of diabetes care in general practice and hospitalisation.

Methods : This study linked a number of administrative data collections using the Centre for Health Record Linkage (CHeReL). The primary data base was the Southern Highlands Division of General Practice diabetes register (CARDIAB), diabetes recall and management system used to recall patients for review and monitor diabetes care. Demographic and clinical data on 1,261 patients was extracted from CARDIAB for the years 2000 and 2005 inclusively. Using the CHeReL these data were linked to the NSW Admitted Patient Data Collection and Register of Births Deaths and Marriages to create a unit record data collection containing clinical and hospitalisation data.

Results: The mean age of patients was 65.4 years and 55% were male. Diabetes was diagnosed at age 65 years and the duration was 5.5 years. Overall the HbA1c level was 7.1% (sd: 1.2). Among CARDIAB patients we observed an admission rate of 0.8 (sd: 3.4) per patient year of follow up and length of stay of 2.5 days (sd: 6.2). in linear regression analysis there was no association between indicators of control of diabetes or cardiovascular risk factors and hospitalisation, or length of stay.

Discussion: Hospital admission for diabetes is used as a proxy indicator of the quality of primary health care. These data suggest that the relationship, if it exists, may be more complex. Record linkage has potential to enhance and extend primary health care data collections to address questions of policy and practice relevance.

Effective media advocacy strategies for quality and safety professionals

DR DAVID GREENFIELD

Medication errors are a prominent patient safety issue due to their high prevalence and potentially negative outcomes. As with other health policy arenas, news media coverage has been identified as a key influence on patient safety policy. Nonetheless, news reporting of patient safety issues, including medication error, is often under-researched as a background factor influencing policy change. Therefore, analysis of news reporting may provide a useful approach to understanding the role of media coverage in shaping community and political attitudes concerning medication error and the need for policy action.

This presentation reports a study which aimed to fill this knowledge gap by analysing the content of Australian print news coverage of medication errors between January 2005 and January 2010. In addition, a literature review was undertaken to identify media advocacy strategies that have been effectively employed in different fields of health policy.

We believe that the results may be generalized to assist advocates of evidence-based patient safety policies and practices to appreciate the types of popular views concerning medication safety that prevail, and provide a series of best-practice principles for those wishing to effectively engage the media.

The acceptability of a family based alcohol intervention to Indigenous clients of a rural Aboriginal Community Controlled Health Service and Drug and Alcohol treatment agency

BIANCA CALABRIA

Introduction: Indigenous Australians experience a disproportionate burden of alcohol-related harm, relative to non-Indigenous Australians. The number of Indigenous-specific intervention programs to address these harms appears less than optimal, and there have been few rigorous evaluations. There is evidence that family-based approaches can be effective for reducing alcohol-related harms among high-risk drinkers. This evidence, along with the vital role family relationships have for the cohesion and wellbeing of Indigenous communities, suggests that a family based alcohol intervention offers great potential to reduce harms. This study aims to describe the acceptability of a family based intervention for Indigenous clients of a rural Aboriginal Community Controlled Health Service (ACCHS) and drug and alcohol treatment agency; and discuss the implications for tailoring the intervention for routine delivery in Indigenous health care.

Methods: A cross sectional survey of Indigenous clients of a rural ACCHS and drug and alcohol treatment agency.

Results: One hundred (78% female) surveys have been completed to date. Results indicate overall client acceptability of the family based intervention. Survey participants perceived gaining skills to enhance their ability to talk about alcohol problems affecting themselves and their family to be a crucial component of the intervention. Participant recruitment continues and final results will be presented.

Discussion/Conclusion: Overall client acceptability of family based intervention to reduce alcohol related harms, thus far, suggests that it is likely to be acceptable to Indigenous Australians if specifically tailored for delivery in Indigenous-specific health care.

Healthy.me: Impact of a web-based personally controlled health management system on healthcare consumers – preliminary results from three studies

DR ANNIE LAU

Abstract: Online social networking and web-based personally controlled health management system (PCHMS) are much hyped as new public health interventions. Consumers increasingly use such systems to manage their health. Yet, there is scant research evidence for the impact of these systems on health outcomes and behaviours. At the Centre for Health Informatics, we have developed a PCHMS called Healthy.me that enables people to manage their health using a variety of online tools with their health service provider.

This presentation reports preliminary results on how healthcare consumers use Healthy.me to manage their health across three scenarios:

- i) women undergoing in-vitro fertilisation treatment;
- ii) consumers undertaking influenza preventative measures during winter; and
- iii) the establishment of an online GP-patient community at UNSW.

In particular, we will discuss a randomised controlled trial with 855 consumer participants recruited from the UNSW community and examine their uptake of influenza vaccination in the 2010 winter season.

Perceived prescribing competency and acceptance of a computerised provider order entry system

DR MELISSA BAYSARI

This study explored how user perceptions of prescribing competency influenced acceptance of a computerized provider order entry (CPOE) system.

Fourteen specialty teams were shadowed by the investigator while on their ward-rounds and sixteen prescribers from these teams were interviewed.

It was discovered that prescribers received very little feedback about their prescribing errors and so held the view that they rarely made errors.

As a result, users failed to perceive a need for a CPOE system to reduce prescribing errors. The CPOE was not often integrated into the patient interaction and most prescribers reported a preference for paper over electronic prescribing. Keeping users informed about their prescribing errors and the quality-improvement benefits of CPOE may lead to greater acceptance of and satisfaction with a CPOE system.

Expected epidemiological impacts of introducing an HIV vaccine in Thailand: A model-based analysis

KAREN SCHNEIDER

Background: The RV144 trial conducted in Thailand was the first to demonstrate modest protective efficacy of an HIV vaccine. Its estimated initial efficacy was ~74%, but this waned considerably over time.

Methods: We developed a mathematical model to reflect historical and current HIV trends across different at-risk populations in Thailand. The model simulated the expected number of infections that would be averted if a vaccine similar to the RV144 vaccine was implemented in Thailand at varying levels of coverage.

Results: In the absence of a vaccine, we projected roughly 65000 new HIV infections among adults during the period between 2011 and 2021. Due to the waning efficacy of the vaccine, one-off vaccination campaigns were found to have modest long-term public health benefit. We forecast that an RV144-like vaccine with coverage of 30% of the population would lead to a 3% reduction in HIV incidence during the next 10 years. In comparison, 30% coverage of annual or biannual re-vaccination with the vaccine was found to result in 14% and 23% reductions in incidence, respectively. Coverage of 60% without re-vaccination resulted in a 7% reduction. Epidemiological outcomes were found to depend primarily on three factors: vaccination coverage, vaccine efficacy, and the duration of protection the vaccine provided.

Discussion: Due to the short duration of protection that the vaccine provides, our model predicts modest benefit from a one-off vaccination campaign with a RV144-like HIV vaccine in Thailand. Re-vaccination appears to be a key factor for long-term public health benefits. The feasibility of vaccine implementation as well as its economic viability is still to be determined.

Sex and drugs in inner-city Sydney: Sexual risk behaviours and barriers to safe sex among drug users accessing low-threshold primary healthcare

MD MOFIZUL ISLAM

Needle syringe programs (NSPs) may be augmented to provide opportunistic healthcare to their injecting drug user (IDU) clients, a high-risk population with generally low rates of healthcare access. Little is known about the sexual health of IDUs who access such tailored services. This study examines the prevalence of major blood-borne viral and sexually transmitted infections; and correlates of high-risk sexual behaviours and perceived barriers to safe sex, among clients of a low-threshold primary healthcare in inner-city Sydney.

A clinical audit was undertaken, with data extracted manually from clients' medical files and analysed using STATA. Eighty-five percent reported unprotected vaginal intercourse, and 26% unprotected insertive/receptive anal intercourse, in the preceding 12 months. Although prevalence of HIV, syphilis, chlamydia and gonorrhoea were low (<2%), hepatitis C (62%), A (30%), and previous exposure to hepatitis B (25%) were more common. Multivariate analyses indicated that younger clients (≤ 32 years) and those with a history of sex work or recent anal intercourse were more likely to report multiple recent unprotected sex partners. Having a regular sex partner was the most prevalent barrier to condom use (37%), and was more likely to be identified by participants who were older (≥ 35 years), of Aboriginal/Torres Strait Islander descent, and/or heterosexual. Drug intoxication was a second important barrier (20%), and was more commonly identified by primary methamphetamine users. Interventions that increase awareness about (i) the benefits of condom use; and (ii) potential sexual risk from steady partners, targeted particularly towards methamphetamine users, should be implemented.

Cardiovascular absolute risk assessment and prescribing: What do GPs do?

DR SANJYOT VAGHOLKAR

Introduction: Australian guidelines for the management of hypertension and lipids recommend assessing patients' absolute cardiovascular (CV) risk in order to guide management. Those who are at highest risk should receive the most active therapy; a combination of pharmacological and non-pharmacological measures while for those at low risk, medications can be avoided. The first large scale trial investigating the impact of absolute risk assessment (ARA) in Australian general practice was conducted in 2008-2010. The impact of ARA on prescribing of medications for hypertension and lipids is presented in this paper.

Method: 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.

Results: The study involved 34 practices and 1074 patients. The majority of patients were at low risk of cardiovascular disease. At baseline about a third of patients were already on an anti-hypertensive or a lipid lowering medication. There were shifts in prescribing of medications following the intervention however there were no significant differences between groups at 12 months. Exploration of whether ARA triggered changes in pharmacological management consistent with guidelines is being explored.

Discussion: The findings raise issues about GPs' decision making regarding the use of medications for hypertension and lipids, particularly in patients at low risk of CV disease.

How can evidence-based programming contribute to health equity?

JACQUELINE RAMKE

Purpose: Three sub-studies in the field of blindness prevention will be undertaken to develop understanding of available and proposed mechanisms and processes which will contribute to enhancing equity-focussed planning and implementation.

Background and approach: Increasing numbers of low and middle income countries (LMICs) are generating data on the prevalence and inequalities in blindness. To date there are no widely available mechanisms and processes to enable the translation of these data to equity-focussed policy and practice. Even if these inequalities are detected, it is unclear how best to address them.

Existing processes and approaches to measuring health equity will be reviewed, adapted and applied to three separate sub-studies in the field of blindness prevention:

1. The current situation in LMICs with respect to the translation of evidence to practice will be explored by surveying principal investigators of all published population-based eye health surveys in low resource countries undertaken in the period 1997-2010;
2. The evidence to policy and practice process that occurred in the Timor-Leste eye health program in the period 2005-2010 will be retrospectively critiqued;
3. Based on a population-based eye health survey undertaken in 2008, as well as a situational analysis of service data and systems, equity-focussed mechanisms and processes derived from the literature and the above sub-studies will be introduced to a blindness prevention program in Kandy, Sri Lanka to evaluate their appropriateness and effectiveness.

Implications: This synthesis and analysis will contribute to further refinement of mechanisms and processes to improving the inclusion of equity in planning, implementation and monitoring and evaluation. This will be of particular value to populations in LMICs where eye health planners and practitioners will derive insights into how best to address prevalent inequalities.

HIV/STIs among self-identified men who have sex with men in Angiang, Vietnam

QUANG DUY PHAM

Introduction: The prevalence of HIV and sexually transmitted infections among men who have sex with men (MSM) has increased substantially in Vietnam.

Method: From August-December 2009, this cross-sectional study enrolled 386 self-identified MSMs in Angiang, southern Vietnam. Face-to-face interviews were conducted for collecting socio-demographical characteristics and sexual behaviour data. Serology for HIV, syphilis and polymerase chain reaction diagnosis for genital Chlamydia, gonorrhoea were performed. We used multivariate analysis to investigate the relationship between HIV status and selected characteristics.

Results: The prevalence of HIV, syphilis, Chlamydia and gonorrhoea was 6.3% (95%CI 4.3 9.2), 1.3% (95%CI 0.6 3.0), 3.1% (95%CI 1.8 5.3) and 1.8% (95%CI 0.9 3.7), respectively. Nearly 40% of MSMs identified as bisexual and 36.8% of them have ever had heterosexual contacts. The proportion of consistent condom use in the last month with male partners was 20.1%. High ever drug use and injecting drug were reported (29.3% and 16.3%). In multivariate analysis, transvestites compared with non-transvestites (aOR 9.3, 95%CI 1.5 57.4), injecting drug use (aOR 9.5, 95%CI 2.6 34.3) and sex with female sex workers (FSWs) (aOR 10.1, 95%CI 2.8 36.3) were more likely to be infected with HIV.

Discussion: Large proportion of HIV among MSMs was observed in Angiang with low level of condom practice and high use of drug. Transvestites, injecting drug use and having sex with FSWs were significant risk factors for HIV infection. It is essential to promote 100% condom use for all MSMs and needle and syringe programs should be implemented for MSMs who inject.

Patient decision-making in motor neurone disease care

ANNE HOGDEN

Introduction: A study of the enablers and barriers to patient decision-making in Motor Neurone Disease (MND) care was conducted, from the perspectives of health professionals.

Method: Health professionals were recruited from multidisciplinary teams specialising in MND care. They included Palliative Care medical, nursing and allied health staff, community-based allied health staff and Regional Advisors from MND NSW. Focus groups were conducted, using a semi-structured schedule to explore their experiences of patient decision-making in MND care. Transcripts were analysed for emergent themes.

Results: Barriers were grouped into five themes: MND disease characteristics; limited evidence-based treatment options; quality and timing of information provision; access to multidisciplinary services; and the patient response to the diagnosis. Decision-making was seen to be facilitated by prompt referral to an MND specialist clinic, early provision of MND-specific information, and early discussion of future care between the patient, carer and MND team.

Discussion: Health professionals with experience in MND multidisciplinary care were able to identify specific enablers and barriers to patient decision-making. Proactive partnerships between the patient, carer and the multidisciplinary team were thought to provide an environment for optimal and timely decision-making. However, decision-making remains hampered by the limited availability of evidence-based treatment choices, and a lack of MND-specific resources for decision support. Reducing barriers and identifying enablers to patient decision-making promotes improvement in the timing and quality of decisions. These findings can be used by health professionals in generalist teams and specialist MND services.

Validation of a video game device for measuring fall-risk

DANIEL SCHOENE

Introduction: Choice Stepping Reaction Time (CSRT) has shown to be predictive for falls in older people [1]. We conducted a study to validate a video game device for measurement of CSRT that is able to detect differences in fall-risk in older adults.

Methods: CSRT was measured in 47 older (65–90 years) people. Participants were assessed using a well-validated measure of CSRT as well as on measures of cognition (Trail Making Test [TMT] A&B, Digit Symbol Substitution Test [DSST]), physiological fall-risk (Physiological Profile Assessment [PPA]), fear of falling (Falls Efficacy Scale-International [FES-I]; Activities-specific Balance Confidence [ABC]). Test-retest reliability was determined after 1 week.

Results: The CSRT scores from our video game were correlated with the existing laboratory-based measure (Pearson $r=0.86$, $p<0.01$). Test-retest reliability of the system was high (ICC(3,1) = 0.90, $p<0.01$). Response times correlated significantly with measures of fall-risk (PPA: $r=.42$ [95%CI .15–.63], $P<.01$; TMT A: $r=.61$ [.39 –.77], TMT B: $r=.55$ [.31–.72], DSST: $r=-.53$ [-.71 to -.28], $P<.001$; FES-I: $\rho=.50$ [.25–.69], ABC: $\rho=-.58$ [-.74 to -.35], $P=.01$). Participants with moderate/high fall-risk scores (PPA>1) had slower response times than people with low/mild fall-risk scores (PPA<1) at 1146 ± 182 and 1010 ± 132 ms, respectively ($P=.005$), and multiple fallers and single/nonfallers showed differences in reaction time (883 ± 137 vs 770 ± 100 ms; $P=.009$) and response time (1180 ± 195 vs 1031 ± 145 ms; $P=0.017$).

Discussion: Using a video game device it is possible to assess stepping ability and fall-risk. Our system was also able to discriminate high from low fall-risk older adults and suggests a novel way of tracking fall risk on a regular basis from the homes of old adults.

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The production of patient safety in mental health care

JENNIFER PLUMB

Patient safety research often focuses on top-down policy initiatives and systems-level interventions. In contrast, this ethnographic study takes a 'ground up' approach and examines how professionals understand and produce safe care in the context of their everyday practice in a NSW mental health service. Preliminary analysis of data is derived from more than 200 hours' observations of two teams of professionals at work, interviews and documentation.

We find that the maintenance of a safe service constantly obliges mental health staff to negotiate multiple risks, not only to their patients but also to themselves and the wider public. Their perceived responsibility for safety reaches beyond the clinical into myriad social domains including housing, finances and interpersonal relationships. The everyday effort to keep patients safe is characterised by a tension between public and policy expectations to maintain a zero-risk service and the competing and often contradictory demands of clinical practice. This practice is pervaded by uncertainty (over diagnosis, aetiology, treatment, and level of risk) and by a level of professional powerlessness to eliminate risk which is often seen as originating in the patient.

Attempting to resolve these tensions, the clinician orchestrates a temporally and spatially distributed network of human and nonhuman actors which serves as a 'safety net' for the patient. This network extends the standard physical and organisational boundaries of patient safety and amplifies the clinician's ability to monitor and manage risk. We demonstrate the ways in which this 'net' is produced in the daily work of these professionals, and what happens when it breaks.

A pilot study to investigate measurement of physical activity in the general practice team

SHONA DUTTON

Introduction: Physical activity has been identified as an important health enhancing behaviour. Previous research has highlighted the integral position general practice holds in improving population levels of physical activity to achieve health benefits. Attempts to measure physical activity in routine general practice remains limited due the following issues; GP time constraints and inadequate instruments available to measure physical activity. Many studies have evaluated physical activity interventions however most identify weaknesses by relying on third parties, such as researchers to identify patients for interventions, thus failing to develop a tool that is useful for routine practice. An instrument that is transferable and easily interpreted by all members of the practice team, including the patient, is required.

Aims: This study aims to examine whether two instruments for measuring physical activity can be administered validly by different modes within the general practice setting such as; GP, Practice Nurse and patient self report. In addition, it will evaluate the feasibility and acceptability of these instruments in the general practice setting.

Methods: A purposive sample of GPs (N=10) and Practice Nurses (N = 10) from the Sutherland Division of General Practice . A sample of patients (N= 150) aged 18 years and over, who have participated in the GP Exercise Referral Scheme in the previous six months, will be invited to participate in the study. The first phase of this study will involve qualitative analysis of 5 questionnaires designed to measure physical activity. A sample of GPs, Practice Nurses and patients will be selected to participate in semi-structured interviews to provide feedback regarding feasibility. Participants will be asked for their opinions of each instrument. From this, two instruments will be selected for the second phase of the study which will involve testing the instruments in routine practice.

Results: Anticipated results include;

1. Identification of 2 instruments for routine measurement of physical activity amongst GPs and Practice Nurses
2. Validation of 2 instruments for measurement of physical activity by practice nurses.

Discussion: How the results of this pilot study will be used in the forthcoming Partnership (PEP) study regarding the uptake of guidelines in general practice.

Life expectancy in an eastern seaboard Aboriginal cohort

BRONWEN PHILLIPS

Introduction: The life expectancy gap between Aboriginal and non-Aboriginal populations estimated between 9.7 and 20 years depending on method of estimation, jurisdictions and time periods used. The Australian Bureau of Statistics (ABS) maintains that registration of Aboriginal deaths in New South Wales (NSW) is so poor that data from this state cannot be used for the purposes of life expectancy estimates.

The Aboriginal Medical Service (AMS), Redfern provides a cohort of over 34,000 Aboriginal people mostly from NSW.

Aims: The study aims to investigate all-cause Aboriginal mortality for the AMS, Redfern cohort, document current age/sex specific Aboriginal mortality, establish trends in these areas over time and compare these data with other Aboriginal and non-Aboriginal populations.

Methods: A database was designed from the AMS cohort for probabilistic matching of patient records with the National Death Index (NDI). All-cause mortality and life expectancy were then investigated and data compared with that of other groups.

Results: Life expectancy for both males and females in the AMS cohort was substantially lower than life expectancy for corresponding non-Aboriginal people. Life expectancy in the AMS cohort has improved over 1995-2009, and the trend was consistent with Generalised Growth Balance (GGB) model estimates for Aboriginal people in Australia overall, but lower than GGB estimates for NSW Aboriginal people. Life expectancy in the Redfern AMS cohort was estimated to be higher than in Aboriginal people from the Northern Territory and Western Australia.

Conclusions: For the first time mortality and life expectancy in NSW Aboriginal people has been estimated empirically, based on a large sample of Aboriginal people from the AMS Redfern.

POSTER ABSTRACTS

Advance care planning: One size fits all?

DR JOEL RHEE

Aims: Recent studies have explored differences in aims that patients, families and clinicians may have when engaging in Advance Care Planning (ACP) and the impact that this has on how ACP is facilitated. However they have rarely examined their conceptualisation of the process of ACP. Therefore we aimed to explore how the process of ACP is conceptualised by expert clinicians (e.g. palliative care physicians, geriatricians, nurses) and key stakeholder organisations (e.g. health departments, professional societies, consumer organisations). We then examined the impact of this on how ACP is facilitated and implemented.

Method: Semi-structured interviews were conducted by telephone. Recorded interviews were then transcribed and analysed using Grounded Theory Method utilising NVivo8 software.

Results: Twenty-three participants were interviewed. There were major differences in how the process of ACP was conceptualised by the participants. One was an individualistic model of ACP where patients were seen as individual units making decisions regarding their own future. Another was a family model that recognised that care was provided not only to patients as individuals but also to family as a unit. And there was a partnership model that emphasised the trusting relationship between patients and their health professionals. Different views existed not only across different participants but also within the same participant. Such interpersonal and intrapersonal differences in views were best explained in relation to specific situational context of the particular scenario that the participant was talking about, including the patient's illness characteristics, family and social characteristics and nature of the patient-health professional relationship.

Conclusion: Our study highlights the need to avoid a one-size-fits-all approach to ACP by individualising the process of ACP according to each patient and his or her family's context and situation.

Randomised control trial of a brief cannabis intervention delivered by telephone

**PETER GATES, JAN COPELAND, MELISSA
NORBERG, EROL DIGIUSTO**

Background: Despite its widespread use, relatively few cannabis users present to treatment, with only 31,980 episodes of care provided for primary cannabis use problems in 2006-07. The barriers to cannabis treatment highlight the importance of providing additional outpatient treatments that are specific to cannabis.

This study explores the potential of the Cannabis Information and Helpline (CIH), a free national telephone service to deliver a brief intervention to those seeking assistance with cannabis related problems.

Methods: A sample of 160 callers to the CIH volunteered to participate and was randomised into two groups. The first group received a four session motivational enhancement and cognitive behavioural therapy treatment condition over approximately four weeks with a primary focus on reducing cannabis use. This group was assessed pre-treatment, post-treatment and at two months post treatment. The second group was a delayed treatment control condition and was assessed at similar time intervals to the intervention group.

Results and Conclusions: 110 individuals completed both follow ups. This paper describes a GEE analysis regarding the intervention effects on reductions to cannabis use and improvements in mental health characteristics. Results support the utility of conducting a brief cannabis treatment by telephone.

Interventions to increase re-testing for repeat chlamydial infection: A systematic review and meta-analysis

REBECCA GUY, JANE HOCKING, NICOLA LOW, HAMMAD ALI, HEIDI BAUER, JENNY WALKER, JEFFREY KLAUSNER, BASIL DONOVAN, JOHN KALDOR

Introduction: Repeat infection with *Chlamydia trachomatis* following treatment is common and increases the risk of sequelae. Despite clinical guidelines recommending re-testing within 3 months of treatment, re-testing rates remains low. We undertook a systematic review of studies which evaluated interventions aimed at increasing re-testing for repeat chlamydial infection.

Methods: We searched Medline, EMBASE and conference websites from 2000 to September 2010 using variations of the terms "chlamydia" and "re-testing" and "intervention" to identify studies which compared rates of re-testing for repeat chlamydial infection between patients receiving and not receiving an intervention. We used meta-analysis methods to calculate the overall relative risk effect on re-testing rates, as well as undertaking a sub-analysis by strategy type.

Results: We identified eight studies satisfying the inclusion criteria, including four randomized controlled trials and four controlled observational studies. The studies described 12 intervention strategies. All were conducted in the United States. The overall effect estimate relative risk (RR) for any strategy was 1.45 (95% confidence interval (CI):1.35-1.55); RR=1.80 (95%CI:1.63-1.97) for four studies using reminders such as postcards, phone calls, letters and emails (individually or in combination); 1.25 (95%CI:1.12-1.38) for four studies using mailed screening kits with or without reminders; 2.15 (95%CI:0.92-3.37) for two studies using motivational interviewing with or without reminders; 1.35 (95%CI:0.88-1.82) for one study promoting re-testing guidelines to clinicians; and 1.16 (95%CI:0.38-1.93) for one study using a \$20 patient incentive to encourage re-testing.

Conclusion: Reminders and mailed screening kits can increase re-testing rates by 80% and 25% respectively.

An assessment method focussed on clinical collaborative competencies: What is its impact on learning?

ASELA OLUPELIYAWA

Introduction: Learning to collaborate effectively within health care teams is important throughout the career of a medical professional, but especially in the transition from student to intern. My aim was to develop a focussed assessment approach to support medical students' learning of the collaborative competencies most relevant to interns.

Methods: The assessment was based on important intern tasks e.g. clinical handovers, requesting consults, and focussed on critical intern behaviours. It was trialled at the University of New South Wales (n=29) and University of Colombo, Sri Lanka (n=30), among senior medical students. Surveys of perceived competence were administered pre and post assessment with participants, and with students in a control group in similar rotations. Focus groups with students (n=6) and interviews with assessors (n=7) were also used to explore the impact on learning.

Results: Qualitative findings suggest that the assessment tasks and focussed behaviours promoted learning; through positive engagement, reflection, and constructive feedback. Compared to the control groups, the increase in perceived competence of participants at the point of graduation (UNSW) was more, while the increase in perceived competence of participants in earlier stages (Colombo) was less. The clinical workload of assessors, and difficulties in giving feedback when students work as fellow team members were among the challenges identified.

Discussion: The impact of this assessment may be twofold: it may improve the competence of students who are closer to the actual stage of performance (i.e. internship), while for more junior students it may clarify the nature and level of competence required. The nature of feedback in the different settings may also influence perceptions of competence differently. Targeted performance of tasks, a focus on specified competencies and the importance of feedback may need to be emphasized to maximize the potential of assessment to drive learning.

Overview of current evidence for the possible aetiological role of human papillomavirus (HPV) in oesophageal squamous cell carcinoma

DR SURABHI LIYANAGE

Oesophageal cancer is the eighth most common malignancy globally, with a worldwide annual incidence of nearly half a million cases. It is the sixth most common cause of death from cancer, claiming the lives of 406,000 people in 2008 (1). Despite the recent increase of adenocarcinoma in Western countries, squamous cell carcinoma remains the predominant histological subtype worldwide.

Oesophageal squamous cell carcinoma (OSCC) has a highly variable sociodemographic and geographical distribution, with up to a 500-fold variation between high and low incidence regions (2). With incidence rates as high as 246/100 000, the Eastern Cape of South Africa, Northern China and the Caspian Littoral of Iran have been identified as the most high risk regions in the world.(3)

The regional variation may be explained by the multifactorial aetiology of OSCC. Among potential risk factors, the role of human papillomaviruses (HPV) in OSCC has been studied over the last three decades with conflicting results. However, as a general trend, studies carried out in high incidence OSCC regions have reported higher rates of HPV detection in OSCC tissues in comparison to reports from low-risk settings. In addition, the high-risk oncogenic HPV types 16 and 18 have been the most commonly reported genotypes isolated from OSCC tissue. With associations to many anogenital and aerodigestive cancers, it has been estimated that HPV is responsible for 5.1 percent of the global cancer burden.(4)

The recent development of the prophylactic HPV vaccines Gardasil® (Sanofi Pasteur MSD) and Cervarix® (GlaxoSmithKline), has been heralded a triumph in the public health domain, in the battle against cervical cancer. In a low incidence country such as Australia, further research is necessary to determine whether HPV plays a role in the aetiology of OSCC, to inform future vaccination policy.

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Models to determine cascading of errors leading to adverse events: Improving patient safety in health care

JASON THORNE

The Institute Of Medicine's report "To err is human" Kohn et al. [1999] excited a deal of activity in providing safer health care, and there is still work to be done to re-duce avoidable medical harm (Ocloo [2010]). Due to introduction without adequate analysis to identify holes such as lack of compliance (Ong and Coiera [2010]) and inadequate training of sta (Dror [2011]), the current layers of redundant defences in the complex system of health care delivery do not guarantee sucient safety for patients.

This project investigates how cascading sequences of errors contribute to adverse events in current health care processes. Analysis of data obtained from a metropolitan teaching hospital observing 101 patient transfers (Ong and Coiera [2010]) has been used to train a Conditional Random Field (CRF) model. The CRF structure allows a sequence of observations to be used holus-bolus to determine the probable state at each time step. This allows correlation to be exploited over all time steps, and relaxes the condition of independence (Wallach [2002]). I have used the model to identify particular sequences of errors that have a tendency to escalate error and increase risk of harm, which in turn indicates process stages where improving redundancy, vigilance or compliance would be most eective to enhance the safety of health care delivery.

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Love patrol: Bringing the 'Tabu' into Pacific living rooms

ROBYN DRYSDALE

Introduction: This paper will discuss audience reaction in Fiji and Vanuatu to the Pacific's first TV series, "Love Patrol", a specifically designed drama on HIV/STI issues. Pacific cultural and traditional factors present significant challenges in preventing HIV where taboos prevent open discussion of sexual matters and compound the vulnerability of people in the region. 'Edutainment' is the process of designing and implementing messages to entertain and educate. Specifically, I will show how "Love Patrol", produced by Wan Smolbag Theatre in Vanuatu and distributed across the region, increases knowledge and interpersonal communication on HIV and safer sexual behaviours.

Methods: This study investigates indicators of social change taking place which have been facilitated by Love Patrol. To do so, it utilised in-depth interviews with viewers and semi-structured interviews with community leaders/ service providers to assess what contribution Love Patrol is making to HIV responses in Fiji and Vanuatu.

Results: Results to date indicate that the audience reception is extremely positive; Love Patrol is highly valued as a credible and entertaining educational vehicle. It contributes to creating greater openness and willingness in talking about traditionally taboo subjects and stimulates community dialogue. The data suggests that it may also be associated with positively influencing audience attitudes towards marginalised populations such as people living with HIV, men who have sex with men and sex workers.

Discussion: This study is still ongoing, but my results to date indicate that Love Patrol is getting people in local communities talking about HIV and increasing acceptance of those most at risk.

Merging the National AIDS Registry and the National HIV Registry to establish a single yet complete National HIV Registry

TARANA LUCKY

Introduction: Since their establishment in 1982 and 1990, the National AIDS Registry (NAR) and National HIV Registry (NHR) have separately maintained the national AIDS and HIV notification records in Australia. AIDS data are incomplete and rarely used in Australia in the current era. There are also cases in the NAR that are not in the NHR. It is timely to consider merging of these two registries to establish a single NHR by linking all the AIDS records from the NAR to the NHR. This project tends to identify these AIDS records and add them to the NHR as new HIV cases. In addition this project also aims to conduct statistical analysis of historical AIDS data.

Methodology: The project involves a deterministic record linkage process that includes the sequential steps of developing matching decision algorithm(s), standardisation and parsing of the variables, blocking, matching, clerical review and linking of NAR records to NHR. All of 10,745 NAR records are being matched against 29,622 HIV records in NHR. The historical AIDS data will be analysed to determine trends over time in HIV transmission in Australia by comparing distribution of demographic and other risk factors including route of HIV transmission among different subgroups of HIV infected individuals in Australia. The risk profile comparison of people with HIV between those who developed AIDS and those who did not will be conducted using multivariate regression analyses.

Result: The sets of key rules and decision algorithms have been developed. Standardisation and parsing of the variables, blocking, matching have also been completed. Clerical review of the possible matched and unmatched cases (for which a definite decision could not be made at first instance) is currently being accomplished that also involves confirming with the relevant state and territory health authorities. This process is resulting in additional 500-800 cases added to the NHR.

Discussion: The key strengths of this project include its comprehensive approach with attention to detail and the intent to maintain maximum completeness of the HIV record in Australia. Manual checking by clerical review and checking the consistency of records are also incorporated within the process to enhance accurateness of the data. However, constraints remain for AIDS records where definite decisions cannot be made even after initial clerical review particularly for the early AIDS cases due to incompleteness of data fields for some cases.

HIV prevalence is rapidly increasing among men who have sex with men in China: A meta-analysis

ERIC CHOW

Introduction: Multiple studies reported a fast spreading HIV epidemic among men who have sex with men (MSM) in China. This study aimed to estimate the magnitude and time trends of HIV prevalence among MSM in different geographical regions of China through a systemic review and meta-analysis.

Method: A systematic review of published articles was conducted by searching the Chinese and English database from 2001 to 2009. Meta-analyses were conducted over a final set of 91 studies to estimate national and regional HIV prevalence among MSM in China. The effect rates of pooled prevalence estimates, 95% confidence intervals (CI) and relative weight for each study were determined by using random effect models.

Results: Ninety-four articles were identified (25 in English and 69 in Chinese) and analyzed. National HIV prevalence among Chinese MSM has increased over this period, from 1.4% (95% CI: 0.8-2.4%) in 2001 to 5.3% (95% CI: 4.8-5.8%) in 2009. MSM in Southwest China have the highest HIV prevalence, of 11.4% (95% CI: 9.6-13.5%) in comparison with other regions, which range 3.5-4.8%.

Discussion: Significant increases in HIV prevalence among MSM were consistently observed across all Chinese regions. There is an urgent need for implementation of effective public health interventions to curb the spread of HIV infection among MSM across China, especially in the Southwest.

Precise methods to estimate HIV clinical service capacity are required for efficient HIV workforce planning: An observational study

KYLIE-ANN MALLITT

Background: HIV clinical service planning requires accurate estimates of the number of people living with HIV (PLHIV), and the capacity of existing clinical services. While it is recognised that the clinical workforce with expertise in HIV management is critically undersupplied in most regions, methods to estimate clinical workforce capacity are poorly developed.

Methods: This study was a retrospective observational analysis of records of HIV clinical service capacity in Australia. Participants were general practitioners in Australia who completed an annual Australasian Society for HIV Medicine (ASHM) survey from 2007 to 2009. Additional information on the number of all hospital departments, sexual health services, antiretroviral drug prescribing general practitioners (ARV-GPs) and shared-care services providing expertise in HIV management from 2007 to 2010 was also available.

Results: From 2007 to 2009 the proportion of ARV-GP survey respondents treating 2-9 patients with HIV infection per week increased from 36.5% to 49.1%. The estimated number of PLHIV in Australia has increased by 12.5% in metropolitan areas and 16.5% in rural and remote areas over the period 2007-2010; however, the total number of services with at least one HIV ARV-GP has decreased over the same period.

Conclusions: Current methods to estimate the capacity of HIV clinical services reveal large-scale deficits in the workforce. Further studies are required to more precisely quantify the capacity of the HIV clinical workforce with expertise in HIV case-management for efficient service planning in the specific geographical regions where there is greatest need.

Selecting clinical computing hardware devices for hospital wards

MIRELA PRGOMET

Introduction: Frameworks to guide decisions in selecting computing hardware devices for hospital wards are largely absent from the literature. This fundamental gap in evidence may pose significant challenges for decision makers and implementers of computing devices. This study takes the first step in contributing to such a framework by ascertaining the factors IT vendors deem important to consider when selecting computing devices for hospital wards.

Method: Semi-structured interviews were conducted with twelve vendors, from eleven IT companies, who provide technologies to the Australian and International health sectors. All vendors who were approached agreed to participate in the study. Interviews were analysed independently by two researchers.

Results: When selecting computing devices vendors perceived it important to consider:

- Technology factors, including: infrastructure capabilities; existing devices; device characteristics; and software applications.
- Workflow factors, including: the user's role; type of tasks users undertake; level of information users need to access/capture; location where users need to access/capture information; and user preferences.
- Environmental factors, including: the type of ward; space/ward configuration; levels of concurrency (i.e. number of users operating the devices at concurrent times); and clinician buy-in.

Discussion: The complexity of decision making processes in selecting computing devices necessitates a framework to inform such decisions. By examining the technology, workflow and environmental factors, decision makers can more clearly identify devices to adequately support clinical work practices. These factors are important to ensure that the right device is available to the right person, to support the task they are conducting, in the location that it is needed.

Team characteristics, performance and human resource management: How are they associated in rehabilitation services?

DAVID PEREIRA

Introduction: Team characteristics have been linked to clinical performance in rehabilitation services. While Human Resource Management (HRM) encourages teamwork in healthcare, HRM's association with team characteristics and performance in rehabilitation services has not been established. This association is investigated.

Method: A total of 155 clinical and 10 managerial staff were recruited from seven healthcare organizations. The study utilized a survey, interviews and focus groups. The survey included team characteristics indexes of perceived efficiency and team climate. Job satisfaction was incorporated into the survey as a measure of organizational team performance. Interviews and focus groups explored HRM policy. Secondary data on clinical indicators provided a measure of clinical performance.

Results: Non parametric tests of data highlighted one site with significantly high perceived efficiency, team climate and job satisfaction. This site also registered high clinical outcomes. HRM input from this site indicated the presence of distinct sub teams and staff being visibly recognizable in their organization. At two sites with significantly high job satisfaction scores, team leadership was affirmed in HRM assessments. For another site with a significantly lower job satisfaction score, lack of team leadership was cited in HRM evaluations.

Discussion: The findings indicate HRM elements of service organization and staff recognition are positively associated with team characteristics and performance measures. While an association between team leadership and job satisfaction was determined, the influence of team leadership on team characteristics measures and clinical performance was not established. The study highlights areas for managerial focus to deliver desired rehabilitation team and performance outcomes.

Mavens and bridges: The role of key players in ophthalmic networks

JANET LONG

Social networks are defined as sets of people (or organisations) that have some form of relationship or interaction between them.

Within health care, social-professional networks take diverse forms; both formal, mandated structures (such as doctors, nurses and allied health collaborating together on a ward) as well as informal arrangements between clinicians (such as agreed referral patterns, or discussions over coffee).

Social Network Analysis is used to study these patterns of relationships, explore the network's structure, identify individuals holding key positions and how these relate to the network's function.

This study seeks to add to our knowledge of how networks work by examining the structure of three ophthalmic networks from widely diverse settings and exploring the role of key members called mavens and bridges.

Mavens hold central leadership or co-ordinating roles within networks while bridges form links between isolated clusters and the rest of the network, aiding cohesion and information flows.

Mixed methods will be used: semi-structured interviews with key informants, social network surveys investigating relevant interactions, and documentary evidence will provide data for the social network analyses and allow each network to be drawn.

Network parameters such as density (how well connected members are), mean path length (how many intermediaries are involved in passing knowledge through the network) and reciprocity (how one-sided are interactions in the network) will be computed.

Following analysis, identified mavens and bridges will be interviewed to explore how these powerful roles can enhance or hinder network function.

Hand hygiene compliance in a sample of tertiary and provincial health care facilities in Viet Nam

SHARON SALMON, MARY-LOUISE MCLAWS, DIDIER PITTET, THU LE THI ANH, HUNG NGUYEN VIET

In April 2009, Viet Nam became the 118th country to pledge its support and commitment for the World Health Organization First Global Patient Safety Challenge (WHOFGPSC), Clean Care is Safer Care.

In collaboration with the Society for Infection Control Viet Nam³ and the WHOFGPSC² we will be leading the Clean Care is Safer Care pilot in nine hospitals across Vietnam. For the first time we will be developing and delivering to 9 pilot hospitals across Vietnam hand hygiene education about My 5-Moments, hand hygiene compliance audits and standardised surveillance of healthcare associated infections. I will present an overview of baseline barriers to hand hygiene and the first comprehensive nationwide evaluation of hand hygiene compliance in Viet Nam.

These initial baseline results illustrate the current compliance level in a sample of tertiary and provincial health care facilities in Viet Nam and serve as a powerful advocacy tool to demonstrate the importance of improving hand hygiene.

Innovation in the emergency department: An exploration of the impact of information and communication technology in facilitating the role of nurse practitioners

YU JIA JULIE LI

Introduction: The increased computerisation of healthcare has seen changes in clinician communication methods and patterns, autonomy, and the control and power structures within individual departments and across organisations. Evolving in the 1960s in the United States, the concept of the Nurse Practitioner (NP) is also relatively new to Australia. In the advent of the state-wide implementation of a compulsory clinical patient information system, research is yet to be

undertaken on the influence of such sources of innovation both on each other, and on the Emergency care setting.

Method: A formative, multi-method 3-year longitudinal study involving all NPs and selected clinical staff in the Emergency Departments (EDs) of two large metropolitan public teaching hospitals within an Area Health Service will be undertaken. A qualitative comparison of the NP model of practice across sites through interviews with all NPs and a sample of senior doctors and nurses will be followed by a quantitative time-motion comparison of NP work practices with those of registrars and senior nurses.

Results: Data collection and analysis is complete for the qualitative first phase of the project. NPs agreed that they were clinically responsible for entire patient episodes for cases which fell within a defined scope of practice, and perceived that their role mimicked that of a registrar. Variations arose in relation to the integration of Information and Communication Technology (ICT) into clinical practice among NP participants. Whilst user-friendliness of software was criticised by most NPs, advantages of working electronically included efficiency in the timely access to patient information, and enhanced decision-making from the availability and accessibility of electronic patient and knowledge-based information. Senior doctors and nurses were generally supportive of the NP role, however, perceived that the role was yet to significantly impact upon the department due to limited NP numbers and the relative recency of the position. The need for the NP role in metropolitan EDs was also questioned in the face of increasing medical graduates.

Discussion: Factors which shape the role of the NP are contextual and varied. ICT was perceived as a latent mechanism which facilitated the ability of NPs to address the demands imposed by such factors.

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