Welcome to **Healthy Communities, Healthy Lives** where our aim is to share the world-class research and teaching happening in the Department of Preventive and Social Medicine.

As the University of Otago’s largest and most diverse Department, our multi-disciplinary research encompasses all aspects of public health issues, systems and policies.

Our research and service to the community continues to have far-reaching impact, both nationally and internationally, and we are enormously proud of our staff and their successes and contributions. In 2016, we will be seeking to grow our commitment to and focus on Māori and Pacific health and will be announcing the recipients of two new postgraduate scholarships for Maori and Pacific students.

We hope you enjoy reading about our Department - we look forward to sharing more success stories with you in the future.

Best wishes,

Robin Gauld

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**Coming in 2016: inaugural ‘State of Public Health’ lecture**

**Politics and Public Health**

to be delivered by [Professor Sir David Skegg](#) with an introduction by [Vice Chancellor Professor Harlene Hayne](#).

5.30pm | Wednesday 21st September 2016 | Castle One Lecture Theatre | All welcome
The prediction of future risks is fraught and often falls short. In 2005, Czech-Canadian scientist and policy analyst, Vaclav Smil attempted to forecast major hazards that could result in rapid mass human casualties with disruption of the global economic system, termed ‘fatal discontinuities,’ over the coming 50 years. He identified hazards by looking back on human pre-history and history to identify the impact and frequency of past ‘fatal discontinuities,’ taking the view that past events are probably the most reliable predictors of future events.

Taking this approach, Smil projected that an infectious disease pandemic such as influenza killing tens to hundreds of millions of people is highly probable in the coming 50 years. In fact, more likely and with more fatalities than mega-wars, are wars involving multiple major blocks of the world; massive volcanic eruptions with associated tsunamis; and large asteroid impacts.

Furthermore, there are reasons to believe that history may underestimate future risk for infectious diseases pandemics because of changes associated with the modern world. These changes include those in demographics and behavior; environmental change and land use; breakdown of public health measures; microbial adaptation and change; international travel and commerce; and changes in technology and industry. These have developed in parallel with increases host susceptibility to infection, the emergence of new diseases for example from human encroachment on new microbial ecosystems, and increases in disease transmission such as through crowding and international travel.

The most recent infectious disease problem causing a ‘fatal discontinuity’ was pandemic influenza from 1918 to 1920. This event is estimated to have killed 50 to 100 million people worldwide, or 3-5% of the human population at the time. This pandemic was unusual in that is predominantly killed healthy young adults rather than the young and the elderly. Global spread was almost certainly facilitated by troop movements associated with the First World War. We know that influenza viruses periodically reassort to cause global pandemics, and so influenza remains one of the main infectious diseases risks.

On 16 November 2002, an outbreak of a viral respiratory infection that came to be known as severe acute respiratory syndrome (SARS) began in the Guangdong province of China. Early in the epidemic, the Peoples Republic of China discouraged its press from reporting on SARS and lagged in reporting the situation to the World Health Organization, delaying the initial response. Initially, it did not provide information for Chinese provinces other than Guangdong. Eventually China registered almost 1,500 SARS cases, with travel-associated outbreaks in Hong Kong, Taiwan, Canada, and the United States. At the time there was considerable concern about whether the global health response could get ahead of the rapid spread of SARS epidemic and whether or not it would be contained.

The SARS experience was a wake up call that led to the revision in 2005 of the outdated 1969 International Health Regulations. It was recognised that a new legal framework was needed to detect and respond to modern public health risks and emergencies. In brief, the revised International Health Regulations required member states to notify and verify events that may constitute public health emergency of international concern in their own and other territories; meet minimum standards for national surveillance and response; and implement health measures at borders.
So how has the global health community done since the 2005 revision of the International Health Regulations? Unfortunately the report card is not looking fantastic. Middle East Respiratory Syndrome (MERS), a viral respiratory illness that is thought to be new to humans, was first reported in Saudi Arabia in 2012. There have been widely publicized concerns about delayed reporting and under-reporting by Saudi officials. Three years on, the mode of transmission although understood in broad terms, has not been clearly elucidated or publicized. Consequently data critical for control are weaker than they could be. More recently, the largest ebola virus disease outbreak in history began in 2014. In addition to the challenges associated with the outbreak occurring in fragile states with weak health systems, the World Health Organizations has been criticized for being slow to respond to the outbreak, highlighting that many lives could have been done it more had been done earlier.

With the shortcomings in infectious disease epidemic control since 2005 in mind, the ‘global health security agenda’ was launched in 2014. This is a multidisciplinary effort involving governments, international organizations, and public and private stakeholders to accelerate progress toward a world safe and secure from infectious disease threats and to promote global health security as an international security priority. The global health security agenda recognizes that while the revisions to the International Health Regulations were appropriate and necessary, that considerable resources are needed to implement them in all states and to coordinate a global response to a major disease threat.

So where to from here for global health security? There is a strong case that modern circumstances favor the emergence of epidemics that threaten many or all humans. Amendments to International Health Regulations have strengthened the mandate to detect and report. However, infrastructure in fragile states prevents detection and investigation and political agendas may delay reporting. Furthermore, the World Health Organization has struggled to respond quickly to large and complex outbreaks. There is now considerable new investment in global health security. Time will tell what impact it has, but hopefully the world is keeping up with the growing risk of a ‘fatal discontinuity.’


Professor John Crump

Professor Crump, inaugural McKinlay Chair of Global Health, holds separate qualifications as a medical practitioner (MB ChB and MD), specialist infectious diseases physician (FRACP, FRCP), specialist medical microbiologist (FRCPA), as well as training in tropical medicine (DTM&H) and epidemiology.

From 2002–2011, he lived in Moshi, Tanzania, where he served as Director of Tanzania Operations for the Duke Global Health Institute and Director of the Kilimanjaro Christian Medical Centre (KCMC) Clinical Research Site. In Tanzania he led a large multidisciplinary research program and had a particular research focus on the syndrome of fever and its causes as well as HIV prevention, treatment, and care. He also worked for the US Centers for Disease Control and Prevention, initially as an Epidemic Intelligence Service officer, and then as a medical epidemiologist focusing on enteric diseases, particularly on typhoid fever and other invasive salmonelloses.

Professor Crump has been principal investigator or co-investigator on grants worth more than NZ$25 million since 2002, including through the US National Institutes of Health, the Bill & Melinda Gates Foundation, and the Wellcome Trust. His research interests include the syndrome of fever in resource-limited areas, Salmonella and other invasive bacterial infections, bacterial zoonoses, laboratory capacity and diagnostics in low- and middle-income countries, and ethics in global health.
Dr Emma Wyeth is a busy woman with a vision. As a lecturer in Hauora Māori and Director of the Ngāi Tahu Māori Health Research Unit at the Department of Preventive and Social Medicine, Emma was recently appointed Associate Head of Department – Māori, where she will play a pivotal role in the strategic direction of the Department in relation to hauora Māori.

“To the best of my knowledge this is the only position of its type within the University; a role positioned at leadership level where someone is explicitly responsible for the oversight and leadership of Māori direction and development specifically within a department. I am extremely pleased that Preventive Social Medicine had the foresight to recognise the need for such a vital role. It is also a clear expression of the Department’s commitment to Māori research, teaching and service.”

As part of this role, Emma led a working group which developed a recently-adopted Māori Strategic Plan for the department.

Amongst the initiatives that have been instigated as a direct result of this Plan are the appointments of two new Māori staff members to support Emma in her role: Lisa Te Raki, who recently started as Teaching Fellow in Māori Health; and Michelle Lambert who is a Research Fellow in Māori Health working with Emma on a number of research projects and assisting with the reinvigoration and redevelopment of the Ngāi Tahu Māori Health Research Unit.

The Department has also established an inaugural departmental Māori Postgraduate Diploma in Public Health Scholarship with the recipient to be announced in the near future. This type of student support will contribute towards strengthening and enhancing Māori student recruitment and retention in a field that is extremely important for Māori communities and New Zealand Society more broadly.

Additional to her demanding roles within Preventive and Social Medicine, Emma has also been appointed as a new Health Research Council Māori Health committee member and a Co-Deputy Director of the new Māori Centre of Research Excellence, Ngā Pae o te Māramatanga commencing in January 2016. With $25 million funding over the next 5 years, it is expected that Ngā Pae o te Māramatanga will contribute towards conducting and showcasing Māori research excellence nationally and internationally, as well as capacity and capability building of Māori researchers and Māori communities.

“It is exciting to be involved in these varied roles and initiatives which will all ultimately contribute to improved health outcomes for Māori and our future generations.”

For more information on Emma’s work please contact Emma at: emma.wyeth@otago.ac.nz
As a Research Fellow in the Department of Preventive and Social Medicine, Dr Rebecca Brookland has always had an interest in people’s behaviour and what influences their actions.

Now, as Principal Investigator of the HRC funded project, Older drivers, families and GPs: Navigating the path between mobility and safety, Rebecca will lead the three year project to examine safety and mobility issues facing older drivers.

“For the majority of older New Zealanders, the private car is the main means of transport. With limited alternative transport options, the ability to continue to drive is key to maintaining mobility, independence, and quality of life. It is also important, for everyone’s wellbeing that older drivers remain as safe as possible. Although older drivers have relatively few crashes, due to frailty they have high fatality rates.”

As one quarter of New Zealand’s population will be over 65 years old by the year 2036, Rebecca believes there is a need for a multi-faceted approach of balancing safety and mobility with our ageing population.

With this in mind, Rebecca’s team is using a mixed methods approach. Here they will interview 1200 older drivers to investigate their travel patterns, driving behaviour, and driving-related attitudes and perceptions, and identify how strategies, such as self-regulated driving may help their driving independence as long as is safely possible. Approximately 400 former older drivers will be interviewed about the circumstances leading to cessation and how their mobility needs are being met. To understand issues around driving cessation for support networks, adult children of older drivers will be interviewed as will General Practitioners.

“GPs are key to making decisions about fitness-to-drive and are a pivotal resource for understanding the mobility and safety issues at stake for older drivers. There are many issues GPs face in their relationships with older patients who are dealing with changing driving abilities or adapting to life after licensure.

With a Master’s in Psychology and PhD in Public Health, Rebecca’s principal focus is for this project to make a change for the better.

“I am passionate about improving the health outcomes of whole sectors of the population through informing legalisation, policy and practice. This study will do this by informing the development of evidence-based policy and programmes to address mobility and safety issues facing our ageing population; to allow older drivers to maintain independence through driving for as long as safely possible; and to identify assistance needed by them and their support networks to manage driving cessation and minimise negative consequences.”

For more information please contact Rebecca at: rebecca.brookland@otago.ac.nz
Gagan Gurung: providing a voice for Nepalese citizens

Gagan’s research is focused on exploring the role of ‘citizen voice’ in Nepal, with the primary goal of strengthening accountability of service providers in the primary health care system.

Prior to shifting to New Zealand in 2013 to undertake his PhD studies, Gagan worked in the field of public health for more than a decade, in particular community engagement; health governance; health sector decentralisation; and maternal, neonatal and child health in different international non-governmental organisations.

Based on this work, Gagan was interested in health policy and associated systems research; in particular investigating the role of community engagement to address accountability issues in the health systems of low and middle-income countries.

With a solid foundation of qualifications including a Bachelor’s Degree in Public Health and a Master’s in Public Health, Gagan’s “dream came true” when he was awarded the Otago University Doctoral Scholarship to pursue a PhD in Public Health at the Department of Preventive Social Medicine.

Attaining his PhD is enormously important for Gagan. “With this qualification, it is my hope that I will be able to contribute to a deeper understanding of how existing community accountability mechanisms work, in order to help citizens demand greater accountability from the health service providers in the primary rural health care setting of Nepal.”

Lindsay Robertson: changing tobacco policies

“Tobacco is one of the biggest contributors to health inequities in developed countries.”

Lindsay Robertson’s PhD is exploring different tobacco retail policies that could be introduced in New Zealand to change the way tobacco is sold. “At the moment tobacco is sold almost everywhere, and unlike alcohol, you don’t need a licence to sell tobacco.”

After investigating tobacco retail policies that have been introduced in overseas countries, Lindsay came to see how valuable research could be in terms of influencing public policy, and equally, how important policy approaches were as a tool to reduce inequity.

Lindsay’s passion for her work stems for a desire to work in a field that embraces social justice and reduces inequity. Her undergraduate degree in psychology followed by experience as a mental health promotion advisor led to a Postgraduate Diploma in Public Health; a Master of Public Health and Lindsay is now in the final stretch of her PhD with the Cancer Society Social and Behavioural Research Unit at the Department of Preventive and Social Medicine.

Lindsay hopes her work will go a long way towards nudging the government towards adopting policies to better regulate the tobacco retail environment, which she believes “will be an important step towards New Zealand’s goal of being a smoke-free nation by 2025.”

After completing her PhD, Lindsay hopes to stay on in the Department of Preventive and Social Medicine at the Dunedin campus in a research capacity.
Each year the Accident Compensation Corporation (ACC) receive approximately 1.8 million injury claims and disburse $2.9 billion. Of those claims, researchers at Otago identified that 28 per cent of claims can be for subsequent injuries (i.e. second injuries following an initial injury), making subsequent injury a major contributor to New Zealand’s injury disability burden.

Associate Professor Sarah Derrett and Dr Helen Harcombe aim to reduce that figure, as co-principal investigators of their HRC funded ‘Subsequent Injury Study’, by identifying opportunities for interventions for those who suffer a subsequent injury (sometimes referred to those who are “accident prone”).

Sarah’s clinical nursing experience in rehabilitation and mental health, followed by public health and health services research training have contributed to her research interests in person-reported, health and disability outcomes, prioritisation and equity. She is Director of the Department of Preventive and Social Medicine’s Injury Prevention Research Unit (IPRU) and coordinates a programme of research looking at injury-related disability.

Helen has a clinical background as a physiotherapist; later completing her PhD involving both qualitative and quantitative research on musculoskeletal disorders under the supervision of Professor Peter Herbison, Associate Professor David McBride and Sarah Derrett. Following a post-doctoral position at Surgical Sciences, Helen re-joined IPRU as a research fellow and is now co-principal investigator on the Subsequent Injury Study.

Sarah led the earlier, now completed, HRC-funded Prospective Outcomes of Injury Study (POIS). POIS provided considerable information about predictors of injury outcomes for New Zealanders (see: https://blogs.otago.ac.nz/ipru/research/pois). The POIS team recruited and interviewed 2856 injured people (20% of whom were Māori), and then followed participants with further interviews out to 24 months after injury. Of particular interest internationally, POIS recruited both those who were hospitalised and those not. The non-hospitalised group have often been excluded from injury outcome studies in other countries (due to those research teams being unable to approach those who had not been hospitalised). The non-hospitalised group were able to be recruited to POIS due to support for the study, and letters of invitation to participate being sent to potential participants on the POIS research team’s behalf, by ACC. Data from POIS is now contributing to the five-country Injury-VIBES study which aims to improve international estimates of injury-related disability.

The Subsequent Injury Study team will be able to leverage from the wealth of information collected during POIS – providing a unique opportunity to address a clear gap in knowledge. Sarah, Helen and co-investigators (Dr Emma Wyeth and Ms Gabrielle Davie), together with advisors from within the university (Dr Ari Samaranayaka, Associate Professor Paul Hansen, Dr Trudy Sullivan) and outside, including advisors from ACC, aim to identify: modifiable risk factors predicting ACC-reported subsequent injury (ACC-SI); participation, health and disability outcomes; and costs following ACC-SI. These will be the necessary first steps towards developing interventions for injured populations – closely aligning with ACC’s target to reduce entitlement claims.

For more information on the study, please contact Sarah at sarah.derrett@otago.ac.nz or Helen at helen.harcombe@otago.ac.nz
PhD candidate Erin Penno

Following a background working in the health sector in both the UK and New Zealand, Erin Penno completed her studies for a Postgraduate Diploma in Public Health, during which time she developed an interest in health systems, policy and economics. This led to the decision to do a PhD on an evaluation of New Zealand’s Population-Based Funding Formula (PBFF) at the Centre for Health Systems in the Department of Preventive and Social Medicine.

The PBFF is used to allocate around $12 billion annually between District Health Boards (DHB), however, up until now there has been very little transparency around the PBFF process, proving it to be a politically controversial area of health policy.

Erin’s research aims to increase that transparency by clarifying the current allocation methods and evaluating the capacity of the core determinant of PBFF allocations, known as the cost weights, to explain variations in need, use and expenditure.

“My research has highlighted a need for us to engage in more transparent debate around the funding formula. I’m hopeful that my research will contribute to this and help provide a platform for building evidence-based funding policy in the future.

“After completing my PhD, I am keen to continue my investigation into the PBFF, including issues such as the impact of supply on demand for healthcare and how that relates to health funding allocations in New Zealand. I am also keen to expand upon this research by examining the continuity of service delivery between different health sectors in New Zealand such as primary and secondary care.”

Rebecca Llewellyn: understanding spirituality

After completing an undergraduate degree in neuroscience and psychology, Rebecca Llewellyn undertook a Master’s degree in Public Health at the Department of Preventive and Social Medicine where she studied how different modes of political engagement can impact population health.

“I really wanted to find a way to tackle the root causes of the various social ills of our society and not just take a ‘band-aid approach’, catching people at the bottom of the cliff; I wanted to find a way to prevent them from falling off in the first place.”

Rebecca’s postgraduate studies led to her involvement in an exploratory research project looking at when young adults think they will die, what of, and when.

“This qualitative study illuminated the value of, opportunities for, and barriers to death conversations in the primary healthcare setting.”

Rebecca believes a cultural ‘silence’ on death has rendered both the medical and lay community insufficiently prepared for frank and meaningful engagement with the topic, exacerbated by restricted consultation timeframes.

“It is my hope that this research will contribute towards developing resources and frameworks to support general practitioners’ meaningful engagement with the topic of death both in, and outside of, the end-of-life context.”

Currently an assistant research fellow for the Cancer Society Social and Behavioural Research Unit, Rebecca is working on a first-of-its-kind research survey project looking at New Zealand nurses’ understandings and perceptions of spirituality, patient spiritual needs, spiritual care provision, spiritual care policy and education. Rebecca plans to commence her PhD in 2017, drawing on her interests in wellbeing, spirituality, positive psychology and ageing.
Dr Rebecca Brookland

Reducing the impact of cancer

“It seems like everything causes cancer these days.”

This is one of the many public fears the Cancer Society Social and Behavioural Research Unit (SBRU) strives to allay, whilst effectively communicating the true causes for concern that society faces today.

Working closely with, and largely funded by, the Cancer Society of New Zealand, the SBRU undertakes considerable work in the community where they focus on raising awareness and improving the uptake of cancer protective behaviours; at an individual/whanau level, as well as providing support at organisational, community and policy levels.

One such example was their recent symposium, in association with the Cancer Society, where key researchers from SBRU presented their research in a public forum. Topics included: cancer awareness; sun protection; cancer diagnosis; alcohol laws; and tobacco policies.

Dr Rose Richards Hessell, Co-Director of SBRU, believes that public awareness can create a strong foundation for supporting environmental and behaviour change.

“Understanding and being able to modify awareness is an important part of encouraging the uptake of healthy behaviours, both among individuals and also within the organisations which create the physical and policy environments that support or discourage healthy lifestyles.”

For more information on SBRU please visit: www.otago.ac.nz/sbru