Host Organisations:

Runanga Whakapiki Ake i te Hauora o Aotearoa
Health Promotion Forum of New Zealand

NEW ZEALAND COLLEGE
OF PUBLIC HEALTH MEDICINE

Public Health
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KAHUI HAUORA TUMATANUI
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Hūtia te rito o te harakeke, kei hea te kōmako e kō. Ki mai ki ahau, he aha te mea nui o te ao? Māku e kī atu, he tangata he tangata he tangata!

Tihei Mauriora!

Ngā whakamoemiti ki te Atua, nāna nei ngā mea katoa, nāna hoki i whakamataku i whakawehi i a tātou te hunga ora. Korōria ki tōna ingoa tapu.


Huri kau ana te whakaaro ki tēnei rā, arā, ki a koutou rā te tini me te mano e ora tonu nei i te ao. Nau mai haere mai ki tēnei huihuinga whakahirahira, kia kite ai tātou i te whai tikanga o ngā mahi hauora i waiho iho ki a tātou. Tirohia, whakarongo, kōrerohia.

Nō reira e ngā mana, e ngā reo, e ngā kāranga rangatanga maha o te motu, haere mai, nau mai, haere mai.
Introduction from the Partner Organisations

The inaugural New Zealand Population Health Congress was held at the Aotea Centre, Auckland, 6 – 8 October 2014. The meeting theme, ‘Connecting Communities, Policy and Science’, perfectly encapsulated the origins and goals of this meeting.

The concept of a joint event between the New Zealand College of Public Health Medicine (NZCPHM), the Public Health Association of New Zealand (PHANZ), and the Health Promotion Forum of New Zealand (HPF) originated in early 2012 after similar, successful events in Australia. It was the first time that these organisations had combined forces to plan and deliver a Population Health Congress for New Zealand.

While each Partner Organisation has its own purpose and membership, we share many values and practices, as well as a commitment to improving population health in Aotearoa. Collaboration creates the potential to engage with more challenging and influential speakers, greater diversity of participants in greater numbers, and a programme that will expose participants to new ideas, research and experience in the varied fields of population health.

Connecting with communities, directly and indirectly, is at the core of population health. If our work empowers communities to flourish, then we have succeeded. If we understand and engage with the diversity of communities that make up our nation, we are far more likely to achieve lasting improvements in population health.

Connecting with policy, business and culture recognises that the major determinants of health are socially and economically determined. Population health cannot stand apart from business and politics any more than business and politics can ignore population health.

Connecting with science recognises that we have an obligation to use the most effective tools and innovations available to achieve population health goals. We also have a responsibility to use the taonga of public resources as wisely as possible. This means constantly questioning and evaluating our approaches and sharing our knowledge in fora like this Congress.

The programme, the knowledge shared, and the time spent with colleagues made this a memorable experience for all of us. Our hope is that this gathering empowered delegates individually and collectively to respond more effectively to the problems and emerging challenges of improving population health in Aotearoa.

We also wish to acknowledge and thank the large number of people who contributed their time, energy and vision to make the Congress a reality. It would not have been possible without them.

Caroline McElnay, Chair of Congress Governance Group; President, NZ College of Public Health Medicine
Julia Peters, Previous President, NZ College of Public Health Medicine, 2011 - 2014
Tau Huirama, Chair, Health Promotion Forum of NZ
Jean Simpson, President, Public Health Association of NZ
Introduction from the Chair of the Congress Programme Committee

Tēnā koutou katoa

On behalf of the Programme Committee, I am delighted to provide an introduction to these Proceedings. The Programme Committee worked hard to develop an outstanding line-up of speakers, courses, and presentations for the inaugural Population Health Congress. In addition, the Congress included a broad selection of oral and written papers, symposia and interactive workshops submitted by population health workers from New Zealand and internationally. We considered that the Congress Programme embodied the ethics, evidence, and enthusiasm of population health.

Firstly, the ethics and values of population health were evident in the major themes running through the Congress. There was a strong emphasis on Māori and indigenous health, reducing health inequalities, and responding to climate change. The meeting also aimed to positively influence population health policy and practice by summarising our collective goals in the form of a Congress Declaration. In addition, the Congress programme aspired to ‘walk the talk’ by celebrating diversity, incorporating sustainability, providing healthy food, and including opportunities for exercise and relaxation.

Secondly, this was an evidence-based meeting. It goes without saying that the keynote addresses, the master classes and the proffered papers were supported by research and science. However, the planning of the Congress itself was also based on evidence; during its preparation we surveyed members of the partner organisations to find out what they wanted from this meeting. We listened and tried to deliver a programme that responded to their professional development needs, while at the same time considering the themes of the Congress.

Finally, the enthusiasm for population health was clearly evident in the immense amount of effort contributed by the large Programme Committee (more than 20 active members). This group met, mainly by teleconference, for more than a year to plan the Congress. All donated considerable time and effort to ensure the success of this event. The high attendance numbers also made this the largest public health conference to have been held in New Zealand.

The Congress evaluation showed that these extensive preparations were worthwhile. The online survey was completed by 60% (366/611) of delegates who were sent a link. Delegates were pleased with the quality of the Congress with 89% rating it as a ‘high quality’ or ‘very high quality’ event. Almost all respondents (97%) thought that a Congress of this type should be repeated.

The Programme Committee thanks the Proceedings editors for producing this record of the event. It includes all eight of the keynote addresses, which have been carefully transcribed and revised by the presenters. In additional, these Proceedings include 89 of the proffered papers. These papers were initially reviewed by the Abstract Selection Committee. A total of 270 were accepted: 174 for oral presentation and 96 as written papers. All were included in the abstract book (available on the Congress website). Authors were invited to submit short or expanded papers for the Proceedings. This document therefore provides a valuable ‘snap shot’ of the diverse and important work of public health in Aotearoa New Zealand in 2015.

Ngā mihi

Michael Baker, Chair, Congress Programme Committee
Professor of Public Health, University of Otago, Wellington
Foreword

Piki ake rā ki ngā tīhi o ngā tini maunga o Ngāti Whātua e hora atu nei. I reira huakina au kanohi kia tītiro iho ai te papawhenua e takoto nei. Tirotiro whakamiharo, tirotirohia kia mataara. Tēnā koutou e te Hau Kāinga. Tēnā rā hoki tātou. Tihei Mauriora!

Huri kau ana ngā whakaaro ki a koutou rā ngā tini rangatira i haere mai nei ki Tāmaki Makaurau ki te whakamana, ā, ki te whakanui tēnei kaupapa e pā ana ki a tātou katoa. Kia ora koutou. Kei te tuku hoki ngā mihi ki ngā tohunga nunui i tae ake nei ki te tohatoha whakaaro kia mōhio ai te hunga te ara tika me te ara pai mō tātou katoa. Nō reira, ngā mihi ki a Professor Sir Mason Durie, tō tātou ahurewa kaikōrero, kia koutou hoki ko Philippa Howden-Chapman, Colin Tukuitonga me Shanthi Ameratunga. Kua takotohia e koutou ngā kōrero kia whakatuwhera te hinengaro, kia mōhio ai tātou ngā wero kei mua i a tātou me ngā māhi kia whakaiti.

I tūtaki anō hoki tātou i ngā tohunga kaikōrero nō tāwāhi rā, arā, i a Michael Sparks rātou ko Michael Moore, Kirk Smith me Shiriki Kumanyika. Kua riro mai te hōnore ki runga i a mātou ki te whakarongo ki tēnei roopu rangatira, ki te whakatau hoki o ō tātou mahara i waiho iho tō tātou kaupapa. Nō reira e te iwi he whakawhetai, he mihimihi, he kupu maiohaoha ki a koutou katoa.

Once conceptualised, a new approach sometimes paints a picture of simplicity and practicality. It is only when we get to the point just beyond the excitement and elation of possibly bringing a good idea to fruition that we begin to see the magnitude of the challenge that lies before us. On reflecting upon the journey of this year’s inaugural New Zealand Population Health Joint Congress it is clear that this event has been no different. Bringing together three individual organisations in a collaborative effort to bring something new and satisfying to such a wide array of people has been, to say the least, challenging. But of course with toil and persistence comes reward and in the final analysis the huge success of the Congress was undoubtedly due to the efforts, time and energy of a very large group of individuals. So the notion of collaboration is inherent not only in the theme of “Connecting communities, policy and science” but demonstrated in the actions and contributions of the wider collective.

It is hard to overlook the significant cultural elements of the Congress. The opening pōwhiri at AUT’s Ngā Wai o Horotiu Marae which was for the first time live streamed back to the Congress venue provided both an appropriate basis for acknowledgement of Ngāti Whātua’s tangata whenua status and demonstrated the importance of the Kaumātua Groups vital leadership role which was to permeate the entire event. This was followed by the opening plenary session chaired by Associate Professor Papaarangi Reid, who in her usual inimitable way introduced us to an amazing array of cross-cultural keynote speakers, the first of whom was the much admired Professor Sir Mason Durie. Add to this the Megan Tunks chaired session on Inclusive Cultural Systems, the very well attended Masterclass on Decolonising Epidemiology - reclaiming numbers, the interactive wahakura workshop and the culturally packed social event calendar, and we bear witness to a very progressive cultural event. As if this was not enough we embellish the programme with a Congress Dinner awards ceremony that included the inaugural Health Promotion Forum Toitoi Manawa Award and the PHAs annual Tū Rangatira mō Te Ora award. Finally the Population Health Joint Congress Declaration, a substantial and critical document, is underpinned by Te Tiriti o Waitangi and will have a fully translated/transformed Māori version.

If there was one key message amongst the many that I might dare to choose it would come from the recurring theme of the importance of communities. Michael Sparks and many others touched on communities being pivotal in the search for solutions. This means involvement in decision making at all levels, the devolvement of power and control to communities, and the recognition that communities have
within them the agents, directors and catalysts for positive change. The challenge over the coming years will
be bringing to fruition

the notion that it is important, if not imperative, for all of us to continually connect our work—whether in
communities, policy or science— for the betterment of all.

The contributors to the Congress are much too numerous to name. Instead I offer a humble apology and
perhaps a very deep vote of appreciation to all of you who individually within this collective space ensured
that a wonderful, full and informative event took place. Your leadership, enthusiasm and commitment to
population health—locally, regionally and globally continues to inspire. From the bottom of our hearts, thank
you everyone.

**Trevor Simpson**
Deputy Executive Director and Senior Health Promotion Strategist (Māori Development Portfolio)
for the Health Promotion Forum of NZ
Hauora: Takoha Mai  
Takoha Atu  
With your effort and our effort we will overcome all odds  
With your gift and our gifts we will achieve great success

Background to this Declaration  
Three primary partner organisations; the Health Promotion Forum of New Zealand (HPF), the New Zealand College of Public Health Medicine (NZCPHM) and the Public Health Association of New Zealand (PHA), organised the first New Zealand Population Health Congress held in October 2014. The theme was ‘Connecting Communities, Policy and Science’. 

This declaration is a statement of commitment by those who attended the Congress and fellow members of the partner organisations to strengthen our working relationships. It builds on our complementary contributions to improving population health. This declaration identifies our priorities for collective action in Aotearoa New Zealand and the Pacific nations with which we are closely linked. It also highlights the global nature of many of the factors that impact on health and well-being. We will take action on these commitments and review our progress in three years.

Commitment to action for population health in Aotearoa New Zealand and the Pacific nations  
Building on Te Tiriti o Waitangi as our foundation, the co-hosts of the New Zealand Population Health Congress 2014 and our members affirm our commitment to collaborate to: 

- actively grow and develop our population health workforce, pursuing excellence in all aspects of our work 
- develop and maintain relationships with stakeholders across sectors, with communities and fellow citizens, working to understand our common challenges and to identify and implement solutions 
- create a robust evidence base for population health so that health status and health threats are made visible along with valid evidence about the effectiveness of policies and programmes; 
- promote and lead healthy public policies and programmes; 
- confront social, political and economic forces that lead to: inequities and breaching of human rights, particularly in indigenous communities; and increasing environmental degradation; 
- work to make healthy choices the easy choices wherever people live, work, worship, learn, travel or play. 

We have identified the following, inter-related, priorities for our collective action: 
1. Giving all children of Aotearoa New Zealand and the Pacific nations, with which we are closely linked, the best start in life. 
2. Improving health and reducing health inequities. 
3. Urgently addressing climate change and planetary health.
Our priority actions for population health

1. Giving all children of Aotearoa New Zealand and the Pacific nations the best start in life
   We will work to support implementation of local and international best practice recommendations to address child poverty, prevent child abuse and improve child health outcomes.

2. Improving health and reducing health inequities
   We will support whole-of-society approaches to improving health and reducing health inequities. This requires:
   - provision of culturally appropriate, affordable and accessible health services;
   - actions to reduce the prevalence and impact of key drivers for ill-health and death (including tobacco use, alcohol misuse, unhealthy nutrition, low levels of physical activity, obesity, community violence);
   - attention to the importance of healthy housing, immunisation, clean water and air, food and environments free from contamination;
   - the promotion of mental well-being and resilience;
   - actions to address the fundamental social, economic and political structural factors that sustain inequitable distributions of power, money and resources (including racism, sexism, colonisation, vested economic interests and inequitable economic models).

3. Urgently addressing climate change and planetary health
   We will work to galvanise action from all sectors of society to address the urgent and serious threat of climate change and environmental degradation. We will support a ‘just transition’ to a low carbon future that protects those most disadvantaged in the process and that recognises the rights of climate refugees.

   Capitalising on the co-benefits for health of well-designed climate policies, starting points are:
   - the health system taking leadership in addressing its own environmental impact,
   - more ambitious targets for reducing greenhouse gas emissions, and
   - clear strategies to achieve those targets that align with health and equity goals.

Key drivers for our collective commitment to action

Actions to promote and protect the health of human communities and our planet require collaboration and the ‘organised efforts of society’. The kaupapa of collective action is clear in the rich heritage of Aotearoa New Zealand’s founding document, Te Tiriti o Waitangi, and other frameworks that guide our work. This approach has been reaffirmed more recently in the acknowledgement by policy commentators that many of the challenges to human and planetary health are ‘complex’ interdependent problems. Tackling complex problems requires collaborative and innovative approaches, drawing on the strengths of science, technology, ethics and communities themselves.

We affirm the following as key drivers for our approach to collaborative action:
   - Te Tiriti o Waitangi as the legitimate foundation for our policies and practice and acting to advance healthy futures for Māori;
   - The prevention of ill-health and the promotion of hauora - a broad understanding of health, described in Māori, Pacific and other indigenous models of health and health promotion;
   - Leadership for health equity in Aotearoa New Zealand and the Pacific so as to create societies that are intolerant towards inequities and that affirm everyone’s right to hauora;
   - The use of knowledge and evidence, in its many forms, to inform practice and to maximise the effectiveness of our use of the taonga of public health resources;
   - The intimate link between improving and sustaining the health and development of human communities and populations and the health of our planet.
We strive to be a collective workforce in whom the multicultural public of Aotearoa New Zealand and Pacific nations have confidence, respect and trust. We celebrate our diversity and the many facets of our society and cultures that we represent. We seek to lead effectively from ‘behind, beside and in front’ to address the complex problems confronting us. We also seek to contribute to international thinking and action on the important drivers of poor health and lead by example in global settings where we can.

A bibliography for this Declaration is available on the websites of the three Congress partner organisations. There will also be a Te Reo Māori version available at the same link (under development).

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2 eg World Health Organization's *Human Rights-based Approach to Health* (1946); Alma Ata Declaration on Primary Health Care (1978); Te Whare Tāpapa Whā (1985); Ottawa Charter for Health Promotion (1986); Te Pae Māhutonga (1999); UN Declaration on the Rights of Indigenous Peoples (2007); 'Ala Mo‘ui (2010); The Future We Want Rio+20 Sustainable Development Conference statement (2012).
Celebrating public health achievements at the Population Health Congress

Congress-wide Awards
At the Congress a range of awards and honours were bestowed on outstanding practitioners and leaders within the wider field of population health:

First-time Presenter Award
Michelle Barr - *Children's exposure to food and beverage marketing in public places*

Student Presenter Award
Amanda D'Souza - *Advancing health in all policies for children in New Zealand: Attitudes towards children and childhood*

Abstract Selection Team Award
Janet Hoek - *Some effects of tobacco brand descriptors on smokers' perceptions and behaviours*

New Zealand College of Public Health Medicine Awards

Honorary Fellowships of the New Zealand College of Public Health Medicine were awarded to:

- Professor Sir Mason Durie
- Dr David Tipene-Leach
- Professor Norman Sharpe

Fellowships of the New Zealand College of Public Health Medicine were awarded to:

- Tara Kessaram
- Nadia Bartholomew
- Saira Dayal
- Paula King
- Bronwyn Morris
- Nisha Nair

The Ken Newell prize for outstanding performance in the College examination was awarded to:

- Tara Kessaram
New Zealand College of Public Health Medicine awards

Honorary Fellowships

The NZCPHM Council may award an Honorary Fellowship to a medical practitioner who in the opinion of Council is of national or international eminence, or has rendered exceptional services to the College or the science or practice of public health medicine.

At the Congress, Dr Julia Peters, then President of the College, was pleased to award Honorary Fellowships of the NZCPHM to Sir Mason Durie, Professor Norman Sharpe and Dr David Tipene Leach. Dr Peters noted that this is the first time since its foundation that the College has awarded Honorary Fellowships.

From left: Dr David Tipene Leach and Professor Norman Sharpe at the NZ Population Health Congress Awards Dinner, October 2014.

Sir Mason Durie
Professor Sir Mason Durie completed the MBChB degree from the University of Otago in 1963. He subsequently undertook postgraduate studies in Psychiatry at McGill University before being appointed Director of Psychiatry at Palmerston North Hospital. After serving on the Royal Commission on Social Policy in 1988 he accepted a Chair in Māori Studies at Massey University where he established a pioneering Māori health research centre. In 2002 he became Assistant Vice-Chancellor (Māori) retaining an academic role as Professor of Māori Research and Development. In 2010, he was appointed Deputy Vice Chancellor. He was awarded an Honorary Doctor of Laws degree from Otago University in 2008, and in 2010 was knighted for services to public health and Māori health. Sir Mason is actively involved in a wide range of community, family, iwi, education and health initiatives and leads the Whānau Ora Governance Group. Sir Mason has made a very significant contribution to public health; especially on health gain for Māori and reducing inequalities. He developed the widely used model for Māori health promotion Te Pae Mahutonga.

Professor Norman Sharpe
Professor Norman Sharpe received his MBChB from Otago University in 1968 and his FRACP in 1976. He is an Officer of the New Zealand Order of Merit (ONZM) and a Fellow of the Royal Society of New Zealand (FRSNZ). He is currently Medical Director of the National Heart Foundation of New Zealand and Professor Emeritus in the University of Auckland. Norm was formerly Head of the Department of Medicine and then Head of the School of Medicine in the University of Auckland and also inaugural Chair of the New Zealand Guidelines Group. Norm has been a friend of public health for many years and, as a cardiologist, has held a deep interest in public health aspects of heart disease. In recent years he has spearheaded the Heart Foundation’s national leadership of Rheumatic Fever prevention and control. Norm is a legendary sportsman. He led the Heart Foundation’s “Ride for Heart” in February 2010 when a group of health professionals rode the length of Aotearoa in two weeks to raise funds for a professorial chair in Preventive Cardiology at the University of Auckland.
Dr David Tipene-Leach
Dr David Tipene-Leach is Ngāti Kere from Porangahau, with a professional background in general practice and public health. With an employment history of general practice, academic teaching, public health medicine, and health research, David has been active in the development of Māori primary care and has managed a number of highly innovative public health projects in the prevention of SIDS and of long term conditions, in particular, diabetes. David is fluent in Māori language and custom and has an abiding interest in traditional Māori culture and its associated ritual. He is presently a GP for Hauora Heretaunga, the primary health care clinic at Taiwhenua o Heretaunga in Hastings.

Fellowships of the New Zealand College of Public Health Medicine

Fellows of the NZCPHM are qualified medical practitioners registered in Aotearoa New Zealand who have successfully completed the College’s training programme (or an equivalent international training programme recognised by the College) and are expected to demonstrate the values of the College.

Fellowships were awarded to:
Dr Nadia Bartholomew
Dr Saira Dayal
Dr Tara Kessaram
Dr Paula King
Dr Bronwyn Morris
Dr Nisha Nair

The Ken Newell Prize for outstanding performance in the College examination was awarded to Dr Tara Kessaram.
Health Promotion Forum – Toitoi Manawa Award

Emeritus Professor Sir Mason Durie was the first recipient of the Health Promotion Forum’s new Toitoi Manawa Award. The award was presented by Health Promotion Forum (HPF) Patrons, Sir Anand and Lady Susan Satyanand at the Population Health Congress in October 2014.

Below is an edited version of Sir Anand’s speech to introduce the award and its inaugural recipient. Toitoi Manawa- means to motivate, encourage, incite, inspire. The meaning alludes to encouraging action through the mechanisms of the heart and the soul.

The award aims to:

• encourage and promote excellence, and acknowledge the outstanding efforts of individuals and groups who contribute to advancing the health of society through health promotion activities;

• advance the efficacy of health promotion as a distinct discipline that contributes effectively to our societal effort to promote and protect te hauora - health and wellbeing of peoples, communities and their environment;

• highlight the effectiveness of the unique Aotearoa New Zealand health promotion approach: underpinned by Te Tiriti o Waitangi and the Ottawa Charter for Health Promotion, and based on Māori knowledge, Pākehā knowledge and other forms of knowledge such as Moana Nui a Kiwa and those of the Asian communities.

2014 award focus on strong foundations and advancement of health promotion

The focus of the 2014 inaugural award was on contributions that have both built the strong foundation of health promotion on the context of Te Tiriti and the Ottawa Charter, and have contributed to the advancement of health promotion at the regional and international levels. This focus was based on the significance of 2014 for health promotion in New Zealand and HPF.

• 2014 marks the embarking of the Health Promotion Forum on its second 25 years of service to New Zealand society. A strong, solid and unique foundation has been laid in the 25 years since its establishment in 1988

• While its focus is still national, the Health Promotion Forum has recently increased its scope to contribute at the regional and global levels; a timely move that will define HPF and its service in an increasingly inter-connected and globalised society with complex challenges in which the local is directly influenced by the global, and vice-versa.

Professor Sir Mason Durie

Our recipient has received many awards over the decades for his numerous contributions to New Zealand society. Sir Mason has been described as: “...a towering strength of inspiration, of support, and of example in the ideas he has shared...”. Despite his exceptional record, his humility and generosity is legendary. But his assertiveness and commitment to all the causes that he has served and continues to, is exemplary and instructive.
• His prolific, scholarly research and writing over four decades on a range of disciplines - from education and health to social development and indigenous knowledge - has significantly informed public policies and influenced thinking beyond New Zealand.

• His teaching and transformational ideas in population health, mental health, social development, education, Māori indigenous knowledge and leadership, have enlightened hundreds of students, and informed the development of tertiary educational institutions and wānanga.

• His outstanding leadership has led to many initiatives on the national level, a marked increase in Māori capacity and excellence in education and health across universities and wānanga, and the establishment of a college of health at one of our universities.

• He has served on many national boards, academic committees, iwi leadership groups, and was Deputy Vice-Chancellor of one university and Deputy Chair of one wānanga, to name but two.

Another outstanding New Zealand leader (The Hon. Tariana Turia) has said of our recipient: “Our nation is so much richer for the efforts and intellect of this remarkable man; our future is ripe for transformation because of his commitment.” To the health sector, our recipient has given many gifts from his fine mind and heart.

Specifically to health promotion, he has gifted Aotearoa and the international communities with the health promotion model Te Pae Mahutonga, a model that was inspired by the Ottawa Charter and the knowledge of great Māori leaders before him.

On a personal note it is a great thrill to be part of this evening’s enterprise, as I bring to mind the spectre of a young Judge, newly appointed to the Palmerston North District Court and its circuit, forming in 1982 an enduring professional connection with the then resident psychiatrist of the Manawaroa Unit of the Palmerston North Hospital.
The PHA’s 2014 Public Health Champion is Dr Murray Laugesen. He was nominated by the Canterbury and West Coast branch.

Dr Murray Laugesen is a public health physician. He was Principal Medical Officer in the New Zealand Ministry of Health from 1984-1995 during the passage of major tobacco control legislation. In 1998 he was awarded the World Health Organization “Tobacco or Health” medal, the citation reading “for achievements deemed worthy of international recognition in promoting the concept of tobacco-free societies.”

In 2000 he was awarded the Queen’s Service Order for public services. Since 2000 he has been involved in researching various tobacco and nicotine products as alternatives to cigarettes. He operates two websites, his consulting company at www.healthnz.co.nz and a tobacco policy think tank charitable trust, at www.endsmoking.org.nz

Despite being well past retirement age, Dr Laugesen remains active in the forefront of strategic thinking about how and what we need to do to achieve a Smokefree Aotearoa by 2025. He is an active participant in the Smokefree Canterbury coalition and has a wealth of knowledge about all areas of smokefree which he is always willing to share in a very polite and unassuming way. He has been a key driver in the long journey from an essentially smoking New Zealand society to one where a smokefree future is becoming a real possibility.

Dr Laugesen has recently been very ill, but despite still being in treatment, he continues to provide leadership, a cutting edge approach, and a challenge to the smokefree sector to think outside the square, as we move closer to 2025. His overriding concern is for the New Zealanders who still smoke and how best to support them to be part of our smokefree future. Dr Laugesen says reducing harm from tobacco is so important because of the growing risk it poses to New Zealanders.

“When we first started estimating deaths in New Zealand from smoking in 1988, we said around 4000 deaths were due to smoking. By 1990 that had grown to one quarter of all deaths in smokers was due to smoking. Then in 1994 we said half of all deaths were due to smoking. Now in 2013, comprehensive articles in leading major journals say two thirds of all deaths in adult smokers are due to smoking related. There is nothing greater in all of disease control”
Plenary Presentations
In our arms we have many ways

Shanthi Ameratunga¹
(s.ameratunga@auckland.ac.nz),
¹School of Population Health, University of Auckland, Auckland

Kia ora tātou katoa. Thank you very much everybody, and especially the organising committee for inviting me. I actually feel very nervous! While I give lectures to a class of 1100 ‘wannabe’ health professionals every year and that’s great fun, this occasion, speaking to you, is quite anxiety provoking. Yet it’s a huge honour to follow in the footsteps of those who have gone before me, and I am very grateful for the opportunity.

I want to start with a few points that I shall cover only very briefly. The most obvious (in relation to the topic I am to speak to) is the remarkable increase in the diversity of who we refer to as ‘Asian’. There are interesting discourses about these communities in Aotearoa, particularly about our motivations and reasons for being here as well as our aspirations and relationships with the country as a whole. Sadly, what could be genuine curiosity about the many cultures that make up our nation gets boiled down to ‘race-based politics’ in the media. This kind of biased public discourse is very likely influenced by immigration policies that get turned on and off depending on what may be useful to feed the bottom line.

I think this is destructive for the communities that are coming in, as well as the country as whole. All too often, migrant communities, particularly Asian ethnic groups, are seen as a commodity, a threat, or as victims. Not surprisingly, there is ambivalence about how data on Asian communities are projected, taken account of, and often seen, even by the communities themselves. So I find the task of providing a short statement, on behalf of the Asian community as a whole, difficult. In fact, I’m going to deftly sidestep this challenge but shall touch on some issues I consider relevant to the focus of this plenary session and Congress.

I’m going to start first by acknowledging where I come from, and this starts with my parents’ decision to move to Aotearoa in 1974. Mason, while I admire you for so many different things, my dad, Thakshan Fernando, who you’d recall, often talked of how much he enjoyed and was inspired by working with you in the mental health field. So thank you for that. He moved to New Zealand with my mum Sushila, and we grew up as a family in Porirua where I finished my schooling. This photo of the family was taken in front of our house with Porirua harbour in the background. When we have a family celebration now, it’s a large gathering of extended whānau from around the country and well beyond. A few marriages and a generation later, all the major ethnic categories defined by Statistics New Zealand are covered in my whānau. My parents are cousins, and sometimes I think the only reason they came here was to diversify our gene pool!

One thing I do know is that I have enjoyed a very privileged position captured by a sentiment my father expressed when our plane touched down in New Zealand. I recall him telling the four of us (his children), “Now you guys can be whatever you want to be.” While this may only be an aspiration, it is a privilege not every New Zealand child has. And that is a tragedy.

Notwithstanding media attention and public perceptions of a recent influx, ‘Asian people living in New Zealand’ is not a new phenomenon. Chinese communities came to New Zealand in the late 1800s and early 1900s. Indian communities were in New Zealand at pretty much the same time. Their reasons for being here were often economically driven, brought to work in gold mines while others started up market gardens and orchards. There is an impression of transitions of a somewhat disposable nature, migrations that were not always welcomed. The poll tax, the denial of pensions - these were challenges and discriminatory policies previous generations of Asians in New Zealand had to contend with. This cartoon from 1920 reflects some
of the disparaging views directed at early migrants from other continents. The older person (depicted as a
local European) is telling the younger one, “Wish you’d grow a bit faster mate because coming in are the
Bolsheviks, the Hindus and the Mongolians, and still they come!” That particular perception of migrants from
some communities is now almost a hundred years old.

So who is ‘Asian’ now? This map shows the extensive area of the world included in the Statistics New
Zealand category of Asian. Extending from Afghanistan in the West, across India to Mongolia and Japan, and
then all the way down to the Indo-Fijian community and Indonesia. A vast coverage of countries, cultures,
languages and ethnic groups (not to mention a multitude of other axes of difference) subsumed under
this euphemistically simple category called ‘Asian’. The irony of this homogenisation is nothing new. In the
2013 census, a third of ‘Asians’ in New Zealand were Chinese and another third identified with Indian. The
remaining third - ‘other Asians’ - comprise a wide range of communities growing in number, proportion,
diversity and migration experience. The 2013 census told us that a quarter of the population in New Zealand
and almost 40% of people living in Auckland were born overseas. A third of this group were born in Asian
countries, but many other ethnic groups from countries across the globe make up overseas born New
Zealanders. Not surprisingly, the media commentary around this is fascinating. ‘More ethnic groups than
there are countries here’. We are ‘super diverse’ as Paul Spoonley reminds us. There are ‘unprecedented
changes in Godzone’ as the media reports. It is intriguing to reflect on what all this means to different
people and the extent to which diversity is celebrated or feared.

I am not going to review data on health and clinical issues specific to these communities. I couldn’t do such
a topic justice on this occasion given the variations involved. As an example, just considering cardiovascular
disease - a leading cause of premature death and disability - people of Japanese (low prevalence) and Indian
ethnicities (high prevalence) are at extremes of the continuum in this country. What I would like to highlight
however, is the insidious risk to wellbeing of communities when data about them is absent, masked, forgotten
or glossed over. This article appeared in the New Zealand Herald when the Ministry of Social Development
published a report on household incomes in July 2014. As noted in the conclusion, the article reports that
from 2007 to 2012, child poverty rates among Europeans dropped from 17% to 15%; rates among Māori and
Pacific decreased from 34% to 30% (still appallingly high); and there was a slight increase in rates among
Asian and other ethnic groups, from 27% to 28%. This statement comes almost as a by-line and there is
little in the way of formal analysis of this point in the full report. So whatever does this mean? And who cares
enough to ask the questions? There are very privileged migrant communities (as the media reminds us) but
who is making up the rest such that the average child poverty rate for this heterogeneous group is 28%? If
you look at the actual report, you can’t find the data. The lack of analysis and care with interpretation is like
suggesting we just go to the next page because some of this might just be too hard to unpack.

In the same Herald article, Minister Paula Bennett is quoted as saying “the figures show that ‘Kiwi’
households had bounced back from the recession”. This will be cold comfort to the Pacific family living in a
car (whose story also appeared in the Herald) and the substantial proportion of low-income households in
our country whose realities are a far cry from a post-recession revival.

Bearing on the topic of this plenary session, I am also struck by how the issues just discussed overlap with
future generations that are increasingly identifying with more than one major ethnic group. From the 2001
to 2013 census, the proportions of New Zealanders identifying with more than one major ethnic group
increased from 9% to 11%. As evident in the data from 2013, there is an almost exponential increase
in this proportion when moving from older to younger age groups. In the national youth health surveys
of secondary school students in New Zealand, 29% of respondents identified with more than one ethnic
group in 2001; 42% did so in 2012. It is clear that we have to be prepared to have a more nuanced and
inclusive conversation around questions about ethnicity, identity, and how these interact at a societal level to
influence the health of New Zealanders.
I’d like us to reflect on this statement – and you might want to consider which political leader said it. Might it be John Key?

“A child is born into an utterly undemocratic world. He cannot choose his father or mother, he cannot pick his sex or colour, his religion, nationality or homeland. Whether he is born in a manor or manger, whether he lives under a despotic or democratic regime, it is not his choice. From the moment he comes close-fisted into the world, his fate lies in the hands of his nation’s leaders. It is they who will decide whether he lives in comfort or despair, in security or in fear. His fate is given to us to resolve, the presidents and prime ministers of countries, democratic or otherwise.”

No, not John Key. This is an excerpt from the speech that Yitzhak Rabin, former Prime Minister of Israel, gave in 1994 when he and Yasser Arafat accepted the Nobel Peace Prize. Rabin was assassinated a year later. The irony of these prophetic words given recent events in the Gaza and the Middle East more generally is hard to miss. Ideologies and political situations can collide in ways that are chillingly hazardous to health, and we have to work hard to hold our country’s leaders accountable.

So what can an ‘Asian model’ offer in this context? There is, of course, no ‘one Asian model’ for all the reasons I’ve noted already. So I’m going to leave an Asian elephant in the room.

This photograph from the 1930s is of an Asian elephant in Wellington Zoo. Some of my happiest childhood memories growing up in Sri Lanka are of holidays visiting a wildlife sanctuary called Yala, where I used to enjoy seeing many elephants in the wild. The mental images we have of elephants are often of beautiful, very intelligent animals with strong family instincts, long memories, and a finely tuned sense of intuition, of being able to forecast what’s going to happen.

Yala was among the places in Sri Lanka that had to cope with the front end of the Boxing Day tsunami in 2004. Most people visiting Yala go to the beach front in the morning, because that’s where the elephants are. On that day, about 250 people lost their lives at Yala (30,000+ died in Sri Lanka overall). Not one of the 350 elephants died. They had all got to higher ground. There was no stampede, they didn’t run. They heard the ground talk and they listened. There’s a message here for us on what elephants can feel and foretell that humans are insensitive to.

So I’d like to draw on a couple of reflections from elephant stories for our story today. Some of you might remember the story of the elephant in the dark. Depending on which part of an elephant a person touches, they think they’ve got the whole story. This can also apply to the ways in which we can misuse the idea of culture, ethnicity or identity. Idries Shah, a Sufi philosopher, refers to the Elephant in the Dark parable when he said “From imperial, economic and ideological causes, many cultures are the inheritors, and hence the prisoners, of attitudes of scorn and disdain for other faiths – outlooks which are not ennobling to anyone.” So while talking of our different perspectives can help us understand each other, may result in quite the opposite when pitted against each other.

Thanks to an introduction from my friend and colleague Jenny Janif, I had the great privilege of talking with Abdiaziz Musse recently. As shown by this slide Abdi shared with me, he likened his experience as a Somali migrant arriving in New Zealand to the layers of an onion. Seeing the photo of him in the middle of the onion, I had to say, “Abdi, you look a little scared!” He said, “I was, when I first came to this country. But then I looked at the Somali community (the layer of the onion next to Abdi), they were only just a little bit less scared than I was.” And then he looked at the New Zealand system (outer layer) and realised that the real challenge for migrants is the struggle to understand mainstream New Zealand. But he described a turning point when he went to Te Wānanga o Aotearoa for his academic training. There, he was asked to become more aware of and celebrate his own culture. He talked of how this opened the door to his own
ability to learn about other cultures, inclusivity, tolerance and being collaborative. So there are things we can learn from the tangata whenua, a celebration of their own identity that I think can serve us all.

I want to close with Kashin, an Asian elephant who lived at Auckland zoo that many of you, or your children, might remember. By the way, as migrants are sometimes prone to, ideas and images can hit the wrong mark. So just a caveat: I am not using “Kashin” to remind us of the ASB’s piggy bank or as a reminder of Kashin-class destroyers! I am referring to Kashin, the elephant who lived in this city for forty years, almost as long as I have lived in New Zealand. And I am using the letters of her name as a mnemonic so I can share what I think is important for the future of our population health - and this is a personal perspective.

• K for Knowledge, which is a collective concept. We are all only ever capable of partial knowledge and this gets transacted in a dominant culture. We need to weave the strands.

• A refers to Advantage, i.e., reflect on what privilege confers, and what Alienation means, particularly, as in the case of tangata whenua, alienation from your own land. These erode the foundations of health.

• S for Shared learning and learning to walk in Someone else’s Shoes and the lessons we expose ourselves to through this.

• H for Hindrances, a concept common to several eastern philosophies, including Jainism, Buddhism and Hinduism. Greed, hatred and delusion are some of the symbolic hindrances referred to in these very old faiths and philosophies. Greed and Hatred are self-evident concepts even if we miss their ever-present significance sometimes. Delusion can be more subtle and difficult to discern. I planned to use the same example that Colin Tukuitonga just did, the delusion that it hurts the bottom line to raise the minimum youth wage, but it’s a jolly good thing to raise the Chief Executive Officer wage because it will trickle down and make us all richer. There is also the delusion that bringing people from other countries here because this results in economic gain and makes the nation prosper. We should think about the people first, and the many issues that support or erode their health and wellbeing.

• I for Inclusive Identities, shared goals and aspirations and the Institutional reforms and structural changes required to eliminate discrimination and help everyone thrive.

• N is for Now is the knowing, meaning we have to be in the present. While we recognise the past and have aspirations for our future, the present is essentially where all the action should be. And this requires us to be still.

So, I would urge us to consider collective approaches that celebrate diversity and resilience within a unified framework that is mindful of the unique place of tangata whenua needs and aspirations.

This last photo appeared in the Herald on the day Kashin died. It is a photo of two migrants, Kashin and her keeper Andrew Coers (the senior elephant keeper at the zoo), sharing a quiet moment, a communion if you like. I wonder what Kashin is telling her keeper. I think she is saying, “This country weeps and this country welcomes. Just listen, reflect and act.”

Ka rere atu ngā mihi nui ki a koutou e huihui mai nei i runga i te whakaaro kotahi kia hāpaitia i tēnei kaupapa rangatira. No reira tēnā koutou, tēnā koutou, kia ora tātou katoa.
**Professor Shanthi Ameratunga**

School of Population Health University of Auckland, New Zealand

Email: s.ameratunga@auckland.ac.nz

Shanthi Ameratunga is Professor of Epidemiology at the School of Population Health, University of Auckland. She is a New Zealander of Asian ethnicity, a Sri Lankan of Sinhalese ancestry, a public health physician, a paediatrician, an advocate for youth health (not to mention the health of older people), a supporter of disability rights, and an avid fan of Shrek who declared ‘people are like onions - they have many layers’.
Tūī, tui, tuītuiia: Population health in Aotearoa

Mason Durie¹
(M.H.Durie@massey.ac.nz),
¹Professor Emeritus, Massey University, Palmerston North

Whakarongo, whakarongo, whakarongo mai rā; whakarongo ki te tangi a te manu nei; Tūī, tui, tuītuiia; Tuia ki runga Tuia ki raro Tuia ki roto, tuia ki waho Tuia ki te here tangata ki te wheo ao, ki te ao mārama.
Listen Listen up Listen to the call of the Tui bird Unite with the skies Unite with the earth Unite inner worlds & outer domains Unite individuals with the past, and with their people In order to live in a world of light.

Population Health and the Changing Environment
The verse above conveys much the philosophy underlying conventional Māori approaches to health. Essentially health and wellbeing were associated with the natural environment and the ways in which human populations were linked to the earth, the sky, to each other, to the past and to a bright future. Māori synonyms for health have similar derivations: waiora, water and health; hauora, the elements and health; toiora, flora and health.

But from the mid-1880s a rapidly changing society saw Māori populations shift from hill top communities to lowland villages where quite different environmental threats took their toll. The built environment, family cottages, drainage systems, roads, water reservoirs, did not follow natural lore. The new environments not only brought new building codes but also new health threats, at least for those who were caught between two systems. To aggravate the increasingly hazardous environment, new dangers to survival had been introduced – the musket (much more deadly than the taiaha¹), new foods including flour, and potatoes, and diseases that had not been previously encountered, including tuberculosis, typhoid fever, and measles.

Without familiar markers or accustomed amenities, standards of Māori health deteriorated with predictions by national leaders and politicians that Māori were ‘a dying race’. But around 1900 there was evidence of a renewed determination to survive evidenced by a reversal of the population decline and by increased understanding and adaptation to new codes for living. Much of the reversal could be attributed to remarkable Māori leadership and the emergence of a well-educated ‘Young Māori Party’ (YMP).

The first two Māori medical graduates, Pomare (graduated 1899) and Buck (Te Rangi Hiroa, 1904) were both leaders in the YMP. Both became practitioners of population health, Pomare joining the Department of Public Health as Medical Officer to the Natives, and Buck working in the Department of Native Affairs as well as assisting Pomare. The two were a formidable pair and lost no time training community leaders to become ‘Hygiene Officers’ to improve standards of housing, sanitation and diet. As qualified medical practitioners brought up in rural Māori environments they were able to straddle the old and new worlds. Their skills were put to the test in 1913 when smallpox was reported in Māori communities in Northland.
Enlisting the support of the Hygiene Officers and other tribal leaders, Pomare and Buck embarked on

¹Long traditional wooden weapon.
a strategy aimed at preventing spread and also treating established cases. They personally immunised hundreds of Māori at railway stations, Māori Land Court hearings, and marae. Their tireless efforts paid off and they were instrumental in ameliorating the impacts of a smallpox outbreak that could have been disastrous to Māori as it had been to indigenous populations elsewhere in the globe. In all there were 1000 Māori deaths – more than for the European population but much less than expected.

Pomare and Buck grappled with a changing world. Apart from their own professional learnings they drew on the skills of community leaders, first-hand knowledge of Māori language and culture, and a community-wide approach that would now be recognised as population health. The role of community leaders was no better exemplified by Te Puea Herangi. During the 1918 influenza epidemic she mobilised local communities and then personally worked among villages on the banks of the Waikato River, tending to those who were ill, and then bringing children who had been orphaned back to Tūrangawaewae where she continued to oversee their care through adulthood.

**Globalisation and Impacts on New Zealand Populations**
A hundred years later a new set of environmental risks threaten Māori health. Although there are some similarities with colonisation which had devastating impacts on indigenous populations, the current population health challenges are more complex than those encountered a century ago. Primarily they are linked to global influences – climate change, excesses of food in developed countries and insufficient food in third world countries, global population increases with accompanying global migration, global colonisation by corporates and through the world-wide web, global inequalities between rich and poor nations, and global territorial disputes as natural resources become increasingly scarce.

Health no longer respects national barriers. New Zealand will encounter the same health risks as other OECD countries - Alzheimer’s disease associated with greater life expectancy, diabetes associated with abundance of fast foods, youth suicide associated with unstable relationships and peer pressures, infectious diseases that are unresponsive to antibiotics, alcohol and drug misuse, largely the product of marketing techniques and government tardiness, and extremes of wealth and poverty associated with global corporatisation.

Further, within New Zealand there are inequities and inequalities between population sub-groups and the global trends will have greater impact on those who are worse off. On most socio-economic indicators Māori and Pasifika populations fare worse than non-Māori. The disparities can largely be attributed to environments shaped by poverty and the consequential impacts on standards of health, education, housing, and employment. The pattern is not dissimilar to that of other indigenous peoples who are minorities in their own countries.

**Te Pae Mahutonga**
Clearly different approaches from those in past times will be required to address the challenges arising in modern environments. In 1999 a model relevant to population health and to Māori world views was introduced. The model uses a constellation of six stars, Te Pae Mahutonga (the Southern Cross), as a symbolic map for bringing together the significant components of health, especially as they apply to Māori health. The four central stars represent key tasks of population health: Mauriora (Māori knowledge and culture), Waiora (environmental protection), Toiora (contemporary lifestyles), Te Oranga (participation in society). The two pointers are Ngā Manukura (effective leadership) and Te Mana Whakahaere (autonomy).

Although Te Pae Mahutonga identifies six separate aspects of population health, the important point is that all six, operating together, make up the whole constellation. It recognises that people do not live their lives in sectors but in an environment where multiple influences operate together.
**Whānau Ora**

Contemporary Māori approaches to health have also recognised that no single sector or discipline can affect the level of change needed to address the new risks. The Whānau Ora policy, for example, adopts multi-agency and multi-sectoral approaches to Māori wellbeing. Launched in 2010 it identifies the family as the main unit for interventions but is also concerned with whānau participation in communities and the ways that communities respond to whānau. Collective impact underlies much of whānau ora practice. The impact of one agency or one discipline acting in isolation is no match for the impact of inter-agency and inter-sectoral collaborative approaches. But the more important Whānau Ora aim is that whānau should be self-managing with their own leadership. Although only three years old, there are sufficient positive outcomes to suggest that the programme has the potential to transform approaches to health and wellbeing, for Māori and Pacific families, if not for all New Zealand families.

Three key principles underpin Whānau Ora: integrated solutions – economic, cultural, social dimensions operating together; distinctive pathways - cultural distinctiveness, distinctive networks, distinctive leadership; and goals that empower – whānau self-management, whānau capability building, and whānau leadership.

Fostering a collaborative approach that goes across sectors and disciplines so that meaningful responses can be made to whānau realities, presents challenges at community, research, and government levels. A common agenda for community agencies that have responsibilities for families, and a common agenda for Government Department whose policies have impacts on families, requires a will to collaborate and to contribute to a central goal.

The success of Whānau Ora may ultimately depend on the ways in which sustainable collaborative approaches can be implemented at community and government levels. While Māori and Pasifika leadership within Whānau Ora is committed to those ideals, there is a role for other leadership networks to contribute. Because of their knowledge and skills, and their ability to consider whole communities and populations, population health specialists can play important leadership roles in galvanising the promotion of collective action so that government policies and community practices can be more effective in improving standards of health and wellbeing.
Sir Mason Durie

Emeritus Professor Massey University
Palmerston North, New Zealand

Email: m.h.durie@massey.ac.nz

Sir Mason Durie is a member of the Rangitāne, Ngāti Kauwhata, and Ngāti Raukawa tribes. He graduated in medicine in 1963, completed specialist training in psychiatry at McGill University, Montreal in 1970 and was subsequently appointed Director of Psychiatry at the Palmerston North Hospital. From 1986-1988 he was a Commissioner on the Royal Commission on Social Policy and was appointed to the Chair in Māori Studies at Massey University in 1988. In 2002 he was appointed Professor of Māori Research and Development and Assistant Vice- Chancellor (Māori and Pasifika). He is currently a Professor Emeritus at the University.

For more than four decades he has provided leadership in Māori health research, Māori development, and Māori tertiary education. His extensive publications continue to be widely quoted within New Zealand and internationally, especially in connection with indigenous advancement. More recently his research on Māori family development has provided an important platform for the Government’s Whānau Ora programme.
Don’t expect to be popular: European perspectives on improving public health

Philippa Howden-Chapman¹
(philippa.howden-chapman@otago.ac.nz)
¹Department of Public Health, University of Otago, Wellington

To Professor Mason Durie, congratulations. Tēnā koe, Papaarangi, for that warm welcome. Tēnā koutou Ngāti Whātua, tēnā koutou, tēnā koutou, tēnā koutou katoa.

Now. I was asked to talk about European health. My mother was an English war bride. So that’s part of my ancestry, but it’s quite hard to disentangle my role as Pākehā and my role of working with Māori colleagues. Nevertheless, these are the questions that were proposed to me and I’ve attempted to answer them from a European perspective.

How far have we come in population health? Well I think we do recognise, and there’s a wonderful turnout here from Aotearoa New Zealand and from Australia, the recognition of the power of social determinants of health and the interaction with constrained individual opportunities.

Those of us who are colonial settled in New Zealand with a very swingeing rejection of the poor laws, and the idea of the deserving and the undeserving poor and a very clear recognition that there were winners and losers in charity and it was a very inadequate basis on which to ensure the welfare of a whole people. There was an increasing recognition from Adam Smith onwards that the public good was underprovided by the private market. Consequently we established a government to attempt to shore up the public good and to redistribute wealth. This European tradition was one of our proudest achievements - the formation of first of the liberal state and then the welfare state of which whānau ora is the latest manifestation. I think this a marvellous addition to, but we still need redistribution in a welfare state. And one that involves everybody so that people don’t feel disenfranchised.

So how far have we come? Well, we are having a book launch today from Alastair Woodward and Tony Blakely, about this phenomenon of increasing life expectancy and the male life expectancy converging with women’s, more surely than the Māori life expectancy is, but nonetheless it is. So there are very positive trends.

But then there are some very negative discourses around about the welfare state and its manifestations and the one that Papaarangi Reid mentioned that I feel particularly passionate about is the importance of social housing, of which we have very little in New Zealand. We’ve seen some very painful scenes of first stigmatising the people and then stigmatising the whole area and while having some positive aspects in terms of community development, there are some also very negative aspects of partial asset sales here. I’m not following the Whig theory of history in which we’re on a progressive march to utopia. I think there’s a danger of reversion to the charitable model - which was so hated by our forebears in the nineteenth century - and a growing alienation amongst young people.

I spoke to the OECD (Organisation for Economic Co-operation and Development) at the Treasury who came over a month ago to do their usual review of New Zealand. After talking about some of the things, one of the members of the OECD said, “why is there not more rioting in New Zealand? Why is there not more social unease?” And I said, “well I think there is, but,” as Sir Mason Durie has pointed out, “we turn it inwards in terms of anxiety and depression.” I think the inequalities in income and wealth are growing nationally and internationally. So we don’t see progressive trends, I think.
And this is from a book of Piketty’s that many of you will know, Capital in the Twenty-First Century. And I would highlight to you that if you see that, it starts in the 1700s, this is in Britain because he can go right back in Britain, and it comes up to 2010. You can see the line along the bottom is public capital. That is representation of the public goods that we all have. At the top you can see the dark boxes are national capital, both public and private, and the clear box is private capital. And you can see that it was riding very high and then the events of the twentieth century - the great depression, the two world wars - discombobulated private capital and there was a big drop in it. But then since the war, and most particularly since 1970, we’ve seen, in that period between 1950 and 1970 was where there were extant welfare states in most OECD countries. After that we’ve seen this divergence again between private capital and public good and I think that’s one as public health people it’s not surprising that we share that same adjective. I have to be very concerned about this because private good serves private interests.

So what are the major population challenges ahead? Well I think we need to re-establish that societal contract to ensure our population is healthy, happy, well housed and well educated. Everybody desires that for their children and themselves, or their nieces and nephews. You don’t have to be aspirational to want that. It is fundamental human needs. I think we really have to take on board that extraordinary scholarship of Piketty to think about that growing inequality in income and wealth is only reversed if we ensure that we collectively think it’s important to ensure that there is not this divergence and we need to reform taxes and regulations so they don’t favour the wealthy.

My group, He Kāinga Oranga, many of whom are here, and I are particularly concerned about the quality of private rentals. Social housing tenants are being paid a little bonus if they move into the private sector, but the quality of it is totally unregulated and that’s where a third of us now live.

And I cannot forget, as I think about it morning, noon, and night and am reminded about it, that we are now entering the area of the Anthropocene. This is manmade climate change. So we’re trying to address human issues, while we’ve actually changed the whole of the environment of the planet Earth. We have to think about policies that mitigate carbon emissions. This is not an area that we can afford to be comfortable about. We should be very uncomfortable. In the 19th century, air pollution was seen as a sign of economic progress. This came from a book that my mother brought out about the history of England, and it was considered to be a sign of great enterprise that all these coal fired stations were going. We now know the cost of such pollution don’t want to see we see roads in Waterview look as polluted as Shanghai. In an Anthropocene era, this is not a sign of economic progress but a warning.
What are useful framings and frameworks? Well, in my class in public policy, Te Pae Mahutonga is the one that I think is so wonderfully expressive and of the context of New Zealand. Along with that I think the social determinants model makes us think about the effects of the structure of society and I think it’s a very fine one. We may have to change the metaphors and ease the language a bit, but basically I think it’s served us very well. I think the Treaty of Waitangi, which is fundamentally a European document as we know and the translation has led to all sorts of difficulties, but I think as a friend of mine says, “it’s the first truth and reconciliation document in the world”, and I think it’s served us very well in terms of thinking historically about the relative position of populations and ensuring that we try and both increase our kāwanatanga - sovereignty - and consider the rights of citizenship and issues about equity.

So I think that stands as a very fine document for both European and Māori in Aotearoa. I am particularly interested in new institutionalism as a framework as some of my students will know because it combines economics and sociology. It makes us think about power different organisations, and the formal and informal rules they operate. I think the informal rules are less and less transparent and there are many of us in the audience that think we have to make the rules of power much more transparent.

What are the contributions of European perspectives? Like Sir Mason Durie, I went back and looked at our forebears. I was lucky enough to spend some study leave in the Wellcome Library. These 19th century public health English reformers were tireless visitors of the poor, collectors of data and writers of reports. I think about them every time I think I’m working too hard. They were just amazing. They formed active, committed coalitions with philosophers, politicians, novelists, playwrights, newspaper editors, and Prince Albert. And they were absolutely committed to stopping slavery; they were dedicated to improving social conditions.

Such as Jeremy Bentham, who still sits in a cabinet, his mummified body in the University College London, so he really was an atheist. He was a philosopher, social reformer, and he was a benefactor and friend of Chadwick - who of course many of you will know from his later work. John Stuart Mills who was a philosopher, a political theorist and a civil servant - it’s possible to be both. Florence Nightingale, was an amazing woman who thought very hard after her experiences of reforming nursing in the Crimea about whether it was sanitation or nursing that actually improved health. She worked with Chadwick, who had been the secretary to Bentham, to devolve powers to local councils. And I think this is a very interesting theme, how much should we be looking to local councils and how much to central government?

As Lady Jocelyn Keith would have reminded us, she corresponded with George Grey about Māori housing, she worked tirelessly to improve health care. She followed the terrible famine in India with great interest, recognising that it was about bad management, actually, rather than lack of food. She lobbied to reduce prostitution penalties and I understand that she was one of the first people to use visual information and pie graphs to convey information that she’d found to policy makers.

And then there’s crusty old Sir Edwin Chadwick, who was the secretary of conditions of the poor law. He thought if you could improve conditions, you could stop parishes having to pay so much money to the poor. And then he had the report that he wrote on the working conditions of the working class, which he published at his own expense. And by the end of his life, he had fallen out with doctors, engineers, lawyers and politicians. He felt none of them had taken his work seriously enough. But on almost all the points he raised about sanitation, about the terrible quality of tenement houses, about appalling conditions, he was right on all accounts and he was absolutely steadfast, knowing that he was right.

Sir John Snow of course, a very famous figure in public health and he and engineers worked out that there was the sewerage pipe that was actually flowing into the Broad Street pump. He was a very dedicated physician. He traced the source of the cholera outbreak. Once it was over of course the local authorities put
the handle back on the pump. He worked out that the adulteration of bread was causing rickets, and he was a practitioner of chloroform and delivered two of Queen Victoria's babies. So he was an amazing man. I'd like to say that these people were all supported, they were all amazing leaders in their own right but they were also supported by a number of Societies which rose hugely in the 19th century. The first statistical Society was in Manchester and it was tied very much to government and social reform. We can't appeal to the government to make things better unless we show what's happening at the moment and indicate how it could improve if we have the data.

There was the sanitary conditions of working classes that Chadwick led and he published at his own expense, there was a Health of Towns Commission as people came into the cities; a concern about the appalling conditions there and the fact that life expectancy had dropped so dramatically. There was the first Public Health Act that we followed and we modelled ourselves on in New Zealand, the 1848 one, and then the Epidemiological Society- the precursor of the AEA (Australasian Epidemiological Association) was set up in 1850 in response to the cholera outbreak.

I was lucky enough to spend the first part of the year in Switzerland working with the WHO (World Health Organization) on housing and health guidelines, and I noticed all around Geneva you see these wonderful water fountains, which of course we should have in New Zealand cities rather than soft drinks. And they had plague for three centuries in Switzerland. The population had been completely decimated. So they put in these public water fountains - which they celebrate in paintings - throughout the country to give citizens access to clean water. So they celebrate it artistically as well as - it's wonderful when you're climbing up these hills and you see all these wonderful water fountains.

Finally, we need to establish strong links between doctors, nurses, social scientists, engineers, lawyers, politicians and the community, iwi, if we are to improve living and working conditions. That lesson from the Europeans was absolutely clear. And we need a concerted effort from all these groups working locally, nationally and globally.

Florence Nightingale kept very close tracks of what was happening in New Zealand and India and all around the place. But they worked for almost half a century to drive the legislative reform necessary to restore life expectancy to where it had been a century before. And the public health reformers linked together and read very closely what each other had written. England, Scotland, France, Germany, United States. They drew on each other's efforts and drew strength and courage at very difficult times. And the lesson that many of us are thinking about in the current climate, they were prepared to risk their professional status and their health to draw to the attention of the public the consequences of laissez-faire capitalism and untransparent rules. They wanted democratic rules that everybody stood equal under the law.

The establishment, that many of them tore their hair out about, was very slow to address evidence that the public's health was being compromised by housing, contaminated water, working conditions and the environment in general. And it took another century to embed these reforms in the political welfare system. I think that's important to remember when we see aspects of it being whittled away and demolished. Social housing isn't here just as a luxury, it's here because it does not pay private landlords to provide good quality, healthy, safe housing for those who are on very low incomes or discriminated against in the private rental market. As the Irish were in London, we know Māori and Pacific are in the private rental market here.

And my last thought is in speaking truth to power, we shouldn't expect to be popular. Chadwick certainly wasn't, Snow had a very difficult time, Florence Nightingale had a lot of critics and that wonderful saying of Virchow, “our medicine is politics and social medicine is politics writ large.”
Professor Philippa Howden-Chapman

Department of Public Health University of Otago Wellington, New Zealand

Email: philippa.howden-chapman@otago.ac.nz

Philippa Howden-Chapman is a professor of public health at the University of Otago, Wellington, New Zealand, where she teaches public policy. She is director of He Kainga Oranga/Housing and Health Research Programme, an HRC-funded programme and the Resilient Urban Futures programme (funded by the Ministry of Business, Innovation and Employment) in the New Zealand Centre for Sustainable Cities. She has conducted a number of randomised community housing trials in partnership with local communities, which have had a major influence on housing, health and energy policy.

She has a strong interest in reducing inequalities in the social determinants of health in the context of climate change and has published widely in a number of different disciplines. She has received awards for her work including the Queens Service Order, the Royal Society of New Zealand Dame Joan Metge Medal, the Health Research Council Liley Medal, the Public Health Association’s Public Health Champion Award, the New Zealand Psychological Society Public Interest Award, the University College of London Balzan Fellowship and the EECA Energysmart Outstanding Contribution to Sustainable Energy Award. She is a fellow of the Royal Society of New Zealand.

She is currently the chair of the World Health Organization Housing and Health Guideline Development Group and was a member of the Children’s Commissioner’s Expert Advisory Group on Solutions to Child Poverty.
Using Evidence to Improve Population Health: Some Lessons from the Obesity Epidemic

Shiriki Kumanyika, PhD, MPH
Emeritus Professor of Epidemiology,
University of Pennsylvania Perelman School of Medicine, Philadelphia
President-elect, American Public Health Association

Thank you very much for the kind introduction. I’d like to begin by bringing greetings from Philadelphia, Pennsylvania, where I live. It is the home of the Liberty Bell and where the Declaration of Independence was signed. I also bring greetings from the American Public Health Association. I was pleased to talk with people here who attended our APHA annual meeting last year and who plan to attend our 2014 meeting in November in New Orleans. This November will be our first time in New Orleans since the Katrina hurricane kept us from meeting there several years ago.

I’ve been asked to talk about “evidence,” which is one of my favourite topics. I’m going to base my comments on evidence related to obesity, because obesity prevention is the subject that I know best. I think that using obesity as the example will serve the purpose very well in terms of helping us to explore some of the evidence issues that relate to a complex problem of this type.

A Wicked Problem
Obesity is a classic case of a ‘wicked’ problem (Kreuter, De Rosa, Howze, Baldwin, 2004). This is a term I like; it has an interesting feel to it - that it’s wicked. ‘Wicked’ problems are in contrast to tame problems where the solutions are relatively straightforward if you follow the right principles. Wicked problems are sets of problems that are linked together, embedded in the social fabric and where there’s a lot of disagreement among stakeholders with different vested interests about whether there’s a problem or what the problem actually is. It’s also dynamic, so when you attempt to solve wicked problems they may change; or, a solution may create another problem or change the way you have to go about things. Your success is always relative when problems are embedded in the social fabric. They’re trade-offs; you come up with a better or worse solution, not necessarily the perfect solution or the right answer.

The outcomes for problems like this are determined by many things other than evidence. Even if we did have perfect evidence, there would still be the stakeholder opinions, the judgements, the political forces and resource needs and economic issues that would impact a solution. So in this case there are going to be no best practices or simple answers. The situations are unique and they have to be tailored; this is the messy situation where we need to apply evidence.

We got into this messy situation when we admitted that obesity is a population problem, not just an individual problem. We are not putting individual issues and treatment aside, but embracing the larger view of obesity as a population problem. I’m just illustrating this here; this is the only data-type slide that I’ll show you.
Figure 1: Changes in the distribution of body mass index (BMI) between 1976-1980 and 2005-2006, adults aged 20-74 years: United States.


Comparing these distributions of BMI (body mass index), which is our usual measure of obesity, you can see the effect of an increase of about 11.5 kilograms in the average weight of American adults (with little change in height) over about twenty years. This kind of evidence made it clear that something was going on in society at large, and that it was indeed a population problem.

And when you try to draw this out, you get pictures like the one below. This picture was drawn around 1995-6, as a map of the causal web of influences that affect population obesity. It looks overwhelming, but it's actually one of the least complex diagrams of obesity causes.

Figure 2: Causal web of society processes influencing the population prevalence of obesity

I am sparing you the United Kingdom Foresight “spaghetti diagram” with all the circles and causal loops, and some of the other maps that have been drawn, but this one has an underlying logic. It helps us to organise the phenomena that we’ve actually seen happening over the past several decades: forces at the international and national levels, driving change in communities and localities, which in turn are driving change in neighbourhoods, workplaces, schools and homes to affect individuals in the aggregate so that people are in a chronic positive energy balance and gaining weight or maintaining excess weight. Factors such as globalisation of markets, development, globalisation of media, advertising, which are happening across countries and across borders, are hard to regulate or control. And then there are the multiple sectors-transport, social security, and so forth, to consider. The health sector is there but health-specific aspects are travelling with a lot of other influences that may have more of an impact on the problem through the larger environment. These other sectors may also have more resources to be leveraged to address the problem compared to the resources available in the health sector.

So there are many places to intervene, but one of the points made by the causal web map is that no matter where you intervene you’re going to be connected to a lot of other pathways. The other pathways may influence your success with your intervention and yours may influence what’s going on in those pathways.

Paradigm expansion
So this is what we need evidence about. Not a simple story. The solution then requires a paradigm expansion from individual type solutions to public health solutions. Obesity prevention requires changes in “the way we live, work and play.” I have that in quotation marks because that’s a kind of politically neutral way of saying what is needed. It doesn’t say we need a revolution, the big social transformation, or to turn things upside down but that’s actually what we are saying. But it sounds nicer or kinder when we say we need to change the way we live, work and play.

And we need evidence in a timely manner. These are high stakes decisions because we are talking about the real world of society, and we’re talking about something that we need to keep- like food. We need to keep it but change it. We can’t try to get rid of an industry, or totally muzzle an industry; we actually have to turn that big ship around so that it is supporting healthy living and obesity prevention in particular.

Policy makers and practitioners are faced with a lot of challenging questions, like “How do I decide what to do? How do we know what works? What program should I fund? How do I implement sound programs, what will it cost”? And there’s always, underneath, “will this help me get re-elected”? That’s actually not a joke, because a lot of policies may be passed because it sounds good or is something that the public seems to want, with or without evidence, and then we scramble to see whether this actually works and how to support or get rid of it in case it’s a bad idea.

Resistance too many things that we need to do for obesity prevention comes from both supporters and opponents. You hear things like “obesity prevention programmes don’t work”. That could come from epidemiologists. That could come from researchers who look at the data, put a very strict filter on it and say, “That doesn’t work so we shouldn’t do that”. “There’s no evidence to justify such a policy.” In many cases there can’t be such evidence because the policy has never been put into place anywhere. For example, “this hasn’t been shown effective in a randomised trial (RCT)” comes up around issues like whether there should be a ban on advertising unhealthy foods to children. A reporter once asked me how I could think curbing food advertising to children would help to solve the problem if there hadn’t been a trial showing its effectiveness. And I said [facetiously], “Why don’t you do a trial of shutting off communications media for a year? And then let’s see if the children get thinner”. Of course I meant to imply that the question was ridiculous. You can’t do a randomised trial about some things.
A final example of the type of resistance one hears is a comment made by a colleague following what I had considered to be a stellar presentation by Sir Michael Marmot about the effects of social determinants on obesity. The person said to me, “that is the most unscientific thing I’ve ever heard”. Of course, there are many different types of science. And that was a stellar social science presentation. But it didn’t fit that particular observer’s definition of “science” and must have just seemed like a lot of opinions thrown together.

The Process of Developing an Evidence Framework to Inform Obesity Prevention Decision Making

The Institute of Medicine (IOM), which is part of our National Academy of Sciences in the United States and an independent body that advises the government, has been looking at these evidence issues related to childhood obesity prevention for some time- in reports released as early as 2004, through the present. In the 2004 report (formally published in 2005), which laid out a national action plan to prevent childhood obesity, some work that we were doing in the International Obesity Task Force was cited, later published in a paper led by Boyd Swinburn about the need to expand the evidence paradigm and to look at different types of evidence.

That was in 2004 when we didn’t really have any advice about how to address the issue. We just said that there was something wrong with this evidence picture: we don’t have enough evidence; we have the wrong evidence; the people who generate evidence don’t seem to know how to get their arms around the type of problem that we have. And this came up again and again: in the 2006 IOM report on food marketing to children, which was an effort to link food advertising to children’s weight gain, as well as in a 2007 report on evaluating progress in obesity prevention. Again, the 2007 report was looking at the evaluation models that were being used and they didn’t quite fit – e.g., trying to use six month changes in children’s BMI to evaluate a broad policy way upstream. Then, in 2009 a report was issued with a little bit of a leap of faith, saying to local governments, “these are some things you can do to address childhood obesity outside of school times”, but without the level of evidence that would have been desirable to support the recommendations.

So by that time there was a strong sense that we needed to take a look at evidence and see how we could systemically approach some of these issues. I had the privilege of leading a committee that was given the specific task of developing a framework for evidence-informed decision making in obesity prevention efforts (Kumanyika, S.K., Parker, L., Sim, L.J., 2010). The focus was on approaches for assessing policy and community level interventions that were designed, not for individual treatment but rather to change food and physical activity environments and related policies and practices. The main audiences for the report would be decision makers and their intermediaries as well as people who generate evidence - researchers and evaluators.

The committee task was spelled out in great detail as is common for these reports, which are funded by outside sponsors rather than the IOM itself. We were asked to describe the current nature of the evidence base, what evidence is really out there, what were the challenges associated with integrating scientific evidence into the broader influences. The sponsors wanted a practical framework for how to select, implement and evaluate obesity prevention efforts, including the identification of ways that we could use existing tools or new tools and methods to build an evidence base, and a plan for communication, dissemination and refinement of the framework and its recommendations. It was meant to be viewed as a usable framework as well as a work in progress. The reason that we needed a communications plan was that we would have to sell this both to professionals and researchers and especially to the public policy makers for whom the kind of framework we were advising would actually support making decisions and, where appropriate, supersede preconceived ideas about the type of evidence that would be relevant.
The committee membership was diverse; it was really an exciting committee to serve on and to try to lead actually. There were some whom you would expect - public health nutritionists, prevention researchers and a paediatrician – and also epidemiologists. We expected that the epidemiologists (myself among them) would bring a healthy scepticism to what might appear to be tampering with the evidence standards. One member was the former editor of a prestigious medical journal. I was particularly glad to see him there because several years prior I had heard him say at a conference that he wouldn’t ever be able to accept papers from studies that weren’t based on the evidence from the top of the evidence hierarchy. So I thought that if we could bring him on board with a broader view, we had really done something. And then we also had the credibility of having him on the committee as a part of the consensus; these reports are consensus reports.

We also had people who are used to using different types of evidence and making good decisions based on that - two evaluation research specialists from the field of education, one of whom had written a beautiful article on evidence issues. She is at Columbia Teachers College and works on evaluating natural experiments in classrooms for which there are high stakes. What happens to a child’s life may depend on what class they get into but there is a need to evaluate educational approaches without randomising that child to a particular class. We had some other expertise- and these are some of the same people mentioned earlier - tobacco control veterans and three or four active or past policy makers, a former mayor, one active state legislator and another state government official; and another person who had been in the policy area for some time. So this group represented the potential users, the evidence generators and the people who knew some of the content about obesity prevention.

Development of the framework was approached by answering two main questions: “how can evidence that’s currently available and potentially relevant to decisions on obesity prevention be identified, evaluated and compiled in ways that will best inform decision makers”? and the other, which is a complement, ”how can we generate more high quality evidence to inform decision making”? We identified four steps that we needed to go through based on the committee’s statement of task. I’m going to walk through each of these steps and talk about some of the lessons we learned.

The first step was to identify the diverse needs for evidence. We started this by putting up some scenarios to stimulate our thinking. I will give you several specifics because I’m hoping that this will become less abstract if you can envision yourself in one of these decision scenarios or as advising someone in these decision scenarios. Note that these are all real scenarios that have happened in the United States and probably many of them have also happened here in New Zealand.

- Television advertisements. A federal authority is attempting to determine whether there are sufficient grounds to implement statutory restrictions on television and internet advertising directly to children.

- BMI report cards. A school board member decides whether to vote for a measure to send parents report cards of their children’s BMI levels based on annual weight and height screening. This is a very controversial policy that has been taken up in some United States school districts.

- Menu labelling. A local board of health or a city council considers a proposal to require that menus of chain restaurants show the calorie content of each item.

- Sugar sweetened beverage (SSB) tax. A state legislator decides whether to vote for or against a tax on SSBs.

- Pedestrian access. A city planning authority is considering closing the city centre streets to automobiles to reduce traffic flow and increase pedestrian access to local businesses. This is a physical activity-related policy.
• Parks and recreation centres. An economically strapped city is considering whether to cut some funding for local parks and recreation centres. This is a case where you would need evidence supporting keeping that funding if that in fact would be the desired direction.

• Fresh food financing: (This is a very popular approach in the US.) A community development corporation has been asked to partner in an initiative to establish a supermarket in a low income neighbourhood. “Fresh” food financing is now “healthy” food financing, and it’s now federal policy. But still in a particular instance you may need evidence for a local situation to decide whether to try to get some of the available money for healthy food financing.

• Advocacy priorities: A state based obesity prevention coalition is trying to identify advocacy priorities to address childhood obesity. And hopefully that would be picking these priorities not on the basis of what feels good, but on the basis of something that actually has a good chance of working.

So our conclusions were that we have a responsibility to generate and disseminate evidence for a lot of different reasons and part of our goal was to see what all the different evidence needs are so that the framework would cover these different types of scenarios.

The exercise led to a long list of potential reasons for needing evidence: to justify action and anchor the outcomes that you would use to evaluate the action; to minimise guesswork - although there’s always going to be some guesswork involved; to make the best use of scarce resources; or to justify or maintain effective policies and programmes. Some desirable policies may get ahead of the evidence because they’re passed on a political wave; and then to keep that policy in place, you have to have evidence. A tax on fat and sugar foods could be passed, as in Denmark, but then repealed.

Other potential uses of evidence included avoiding or discontinuing ineffective policies and programmes, avoiding harms, identifying approaches that will provide large scale benefit, identifying a set of strategies that work together, and providing guidance on the ‘how’ rather than only the ‘what’ needs to be done. Using evidence to justify removing a program can hurt, and this could be underlying the fear about having evidence, i.e., if the evidence shows that your favourite project doesn’t work or might make your policy maker angry because you’re telling him (or her) it doesn’t work. There are precedents for that in public health such as in drug treatment. Avoiding harms includes economic harms or cultural harms rather than only biological harms and the same applies to the possibilities of identifying opportunities for large scale benefits. Finally, evidence is useful for identifying a set of strategies that work together to address a wicked problem and also for providing guidance on translation and implementation. If you have something that works in one place or in an ideal situation, how do you actually get it to work when you transfer it to another situation?

The second step was to analyse the available evidence to identify its strengths and limitations. I think we knew how this was going to come out, but we went through the exercise. We used a review of reviews approach, starting about thirteen years prior to this report, which was done in 2009-2010, because that was about the time that the obesity epidemic in the United States was being recognised, and people were trying to find solutions in earnest for the childhood obesity epidemic. The adult epidemic in the United States had been noticed a few years bit earlier. We thought this would be a long enough time to see what evidence base we had. We had all kinds of reviews, including meta-analyses and systematic reviews. We also used other types of evidence such as syntheses, best practice summaries and task force recommendations to get a sense of what people were pulling in as evidence, how they were evaluating it and what they were coming out with.

And if you’ve done these systematic reviews, or read them, you know that you can get up into the thousands of titles very quickly about things that might have come up in an initial search under obesity.
prevention. Some of the reviews had identified twelve articles but some had initially identified thirteen thousand. However, the number of eligible studies in the most inclusive review was only one hundred and fifty-eight. So there really wasn’t much evidence out there and there was considerable overlap, with some of the reviews reviewing the same studies, maybe from different perspectives, but the same studies would keep popping up.

Our conclusions about the evidence base were as expected, because we thought there was an evidence gap. The main conclusion was that the evidence base was inadequate in several respects. There was insufficient evidence of effectiveness for many things but because you kept hearing this repetitious sense that there’s not enough evidence, people interpret that as “there’s evidence that it doesn’t work” - because you can’t really put any evidence forward. There was not much of a framework for looking at evidence, for selecting evidence. Different authors selected different studies based on their own ideas of what should be included in obesity prevention.

There was a focus on randomised, controlled trials and on single interventions of narrowly focused questions- researcher-oriented questions, not decision-maker oriented questions. And there was really an absence of details. We can blame journal editors for this, because they tell you to take your intervention and your results and put it all into less than 3000 words or 3500 words. And there’s not much room to tell how you did the trial and maybe that certain aspects weren’t even studied so that you would know how to really implement this in other scenarios.

The lessons we took away at this stage were: research questions should be user oriented, should really go back to those basic questions that policy makers are thinking about. This had really come home to me when I was on a different committee and we invited legislative staffers to talk with us about obesity prevention. We couldn’t answer any of their questions. I said, “….and I’m supposed to be some kind of an expert?” I mean, they asked very reasonable questions but we had never thought about studying things in that way; we were studying based on our ideas of what’s important to study but not how it could be used to actually solve a policy problem.

So we thought we needed a typology of questions building on evidence-based public health, and that we needed external validity, meaning-- we could have rigorous studies, but if they were so rigorous that they gave you a perfect answer to a question that nobody cared about, that wasn’t really good. So we shouldn’t sacrifice relevance for rigor. We needed a different type of evidence standard, a broader pathway, not a double standard in the sense of less good, but different. And we needed a systems perspective.

The third step was then to say, “okay what can we do, what are the ways that we could go about this”? And we did find quite a bit of writing on evidence based public health (EBPH), really elegant writing, some of it coming from Australia and New Zealand, some from Canada, but the existence of this literature was not well known.

The field was dominated by the literature on evidence based medicine (EBM). So part of what we were doing here was to lift up the way that people had begun to articulate the difference between medicine and treatment- oriented strategies and public health-oriented strategies. We took the questions which in one source were called ‘type one’, ‘type two’ and ‘type three’ questions, but we thought that would be confused with type one and type two error. Instead we used ‘Why’ questions, ‘What’ questions and ‘How’ questions as the way of characterising the types of questions for which we/you would need evidence. I’ll walk through these different types of questions.

For ‘Why’ questions we would get evidence about the health burden, about social or environmental determinants, about health disparities or inequalities, and about healthcare costs. I think that we are pretty
good at gathering this type of evidence. These are the statistics about how many people are affected or where the pockets of poverty are that are leading to not having a supermarket within reach to access healthy food, about which groups have differences in their health statistics, and about how much money we are spending on the problem. The ‘why’ questions are a familiar part of the picture.

Where we really get into trouble trying to get answers is with the ‘What’ questions about what we should do. I think our contribution here was to talk about the need for intervention logic models. Many of the interventions or policies being tried could work in several different ways. Menu labelling is one that’s come up in some of the discussions here. Menu labelling may work directly when people see calories or other ingredients they don’t want and thus buy something else. It can also work through reformulation of products so that what is put on the menu doesn’t turn people away. It could work by getting people to stop buying that item altogether. It could keep people out of the restaurant, like a fast food restaurant; or it could allow people who were worried about the calories to now go into the restaurant because then they could pick and choose from the menu items by using the calorie information.

So there are a lot of different ways, and menu labelling is a good example, because when it was passed in New York City, it was passed not because there was evidence to support it specifically as an obesity prevention strategy, but because the authorities decided that people have a right to know what’s in their food. So we have a principle as the basis for the regulation and we don’t need evidence of effectiveness. Since then there has been a rush of studies of whether or not menu labelling worked that were finding null results. It doesn’t work here; it doesn’t work there, and for African-American teenage males it worked in the opposite direction—“hey, I can get more calories for my money!” So it points out that thinking things through, that clarifying the logic of what we are doing and how we think it’s going to work is critical if you’re going to evaluate, and you have to consider those alternative pathways in your evaluation.

We want to know what the causal pathways are, what the links are between the way you deliver the intervention and specific outcomes, and what all those unintended or unexpected consequences are. And I think we should include here the behaviour of the opposition to whatever strategy we come up with, because we haven’t been doing as well on anticipating consequences of our advocacy with evidence that rebuts some of the arguments that opponents make about the strategy.

‘How’ questions. This is really the big desert, I think, in evidence. We just haven’t prioritised reporting on implementation. There are now new books on implementation science and so forth but we’re catching up with that late. ‘How’ questions relate to external validity, the transferability, the acceptability, the stakeholder opinions, the community stakeholders and other stakeholders, the cost-benefit ratios, the priorities and the types of challenges. You might be prepared to go into a long discussion about the Why you recommend a certain policy or other intervention in your hour with the policy maker, but in the first minute the policy maker says “I like it, so how do I do it”? And you’ve now got fifty-nine minutes where you might not have anything to say if you don’t have implementation evidence.

The IOM L.E.A.D. Framework (Locate Evidence, Evaluate Evidence, Assemble Evidence, and inform Decisions)

We tried to be really inclusive about types of evidence that could be useful for informing decisions about obesity prevention—identifying not only randomised controlled trials but also non-experimental or observational studies, quasi-experiments, qualitative research and analyses, mixed-methods studies, parallel evidence (e.g., using evidence from the tobacco experience), research syntheses, and expert knowledge. This need for greater inclusiveness had come up before, back in the article from the International Obesity Task Force, and had been mentioned in other papers, but we had to actually convince each other on the committee and the public subsequently that there are lots of different types of information that could be
relevant. We know that there are lots of different ways of knowing and producing information. But because we are coming as an arm of biomedicine, we are not aware - we’re not educated about these other ways of knowing and their strengths and limitations or their standards of quality. And some people have even been surprised to find out that there is a quality standard, for example, for qualitative research. They thought that it was just a bunch of stories. And there are stories. I’m not talking about anecdotes that are very useful in swaying policy makers but qualitative research that you can design- where there are standards for analysis and standards for interpretation that should not be evaluated with standards for a randomised clinical trial.

We had to educate each other about how the economists generate evidence. And they really get away without trials. And they can be wrong and they still are very high on the list of evidence generators. The education colleagues on the committee were very helpful to us in talking about these different types of evidence. In talking about expert knowledge we included community-based experts. We included advice on systematic ways to gather expert knowledge; you don’t just ask the person sitting next to you, but use Delphi processes for example. We know all of this but we tried to put it in one place and also say that there's no hierarchy here. We want to use these different types of evidence in their proper place, triangulate them, i.e., use them in complementary fashion, and especially use mixed methods - qualitative/quantitative mixed methods so that you can understand the stories that go with some of the numbers. We didn’t cover public health economics in much detail but in a subsequent article we referred to the CDC (Centre for Disease Control) public health economics group and some of the tools that they’ve developed (Chatterji, Green and Kumanyika, 2014).

The one area that I want to point out that we didn't address at all, but it's very important and should be added as this framework develops, is legal policy analysis. There are many people now who are really well schooled in doing this, coming over from political science, and I think that policy analysis to make sure that the policies that are put in place could even work, is going to be critical. It’s not something that you can necessarily try on your own if you haven’t had some training in it.

Step four was the development of a systematic framework for going forward. The result is in the figure 3 below. It is called The IOM L.E.A.D Framework, for Locate, Evaluate, Assemble evidence and inform Decisions. It’s not a decision making algorithm; it won’t make the decisions. It’s a way of organising and using evidence and enhancing the process so that you get the kind of information that’s relevant. Matching the evidence to the question– if it’s a “why” question you look for “why” evidence. If it’s a “what” question, you look for evidence of some sort of an intervention or natural experiment to see if it worked and if it’s a “how” question, you’re looking for information about implementation issues and costs and acceptability and transferability.
Figure 3: The IOM L.E.A.D framework for Local, Evaluate, Assemble evidence and inform Decisions


This is not a linear framework and it doesn’t have to be a package deal. The principles underlying specifying questions, locating evidence, evaluating evidence within each type of evidence and assembling that evidence can be independently used in any type of relevant effort. Or, you may be at a stage where you really already have your evidence and you want to assemble it and might want to follow the guidelines in terms of transparency and complementarity when putting the evidence together.

This framework is surrounded by reminders about a systems perspective and a reminder about the opportunities to generate evidence at every step. We included a chapter about systems thinking, but not saying that everyone had to do systems science. However, we did include an obesity systems map just to give people an idea of the connectedness of things and a reminder that looking at single interventions could easily lead to the wrong conclusion.

We included guidance for assembling information in the form of a template for reporting findings. If you have a chance to tell the whole story, from beginning to end of why, what and how, the template indicates how you would put that together. The key here is transparency, transparency, transparency. If you say what you did, then people could trace it back just like in any other evidence process. Even though you may be using newspaper articles for some things and academic journal articles for other things, just say what you did, how you used the evidence, and why. We also have guidance there for how you incorporate local wisdom or theory when inevitably you don’t have enough evidence for the perfect story--and how you can use this to inform the decision making process.

For “opportunities to generate evidence”, we were emphasising practice-based evidence; for example, if the experiment or the situation takes place in the real world, putting some boundaries around that and firming up implementation so that you can actually find the beginning and the end. You solve one problem of external validity right there because you’ve done it in the real world; even so it still might not transfer to other situations, but there’s a wealth of evidence that could be generated. It’s not prestigious evidence, it’s not the Nobel Prize type of evidence. It may not feed the ego of a researcher, but if the goal is to inform policy makers it will have a lot of validity and traction because it has happened somewhere.
One lesson from the second phase of our work, from putting the framework together was that this wasn't a shortcut, but rather a wider path to looking for information. I think we might've thought we could take some shortcuts in the beginning, because we were going to be goal-oriented, but it turns out that this could be a time consuming process that should be done by professionals who know their way around information sources.

We also learned that we should develop a comfort level with the uncertainties of evidence related to complex situations. There is such a temptation to control for reality. It makes it easier to study, but darn it, reality comes back; it's there, it never left. And so we have to get used to that. We can't control everything. We must understand, utilise, value and triangulate evidence from the diverse ways of knowing, drawing on the best science in a lot of different disciplines, generate evidence from practice and be transparent.

**Summary**

I will summarise by mentioning what I think are some of the key contributions of this framework and what I think the implications are. Nothing in here is new, and nothing in this report violates the standards of evidence- the desire, the need for validity and reliability, but we highlighted the key tenets of evidence based public health, putting it all together in one place. People were continuing to rediscover the fact that, "hey, there is another way; we don't have to use evidence-based medicine hierarchies." But we tried to put it all in one place and publicise it. Our report was designed so that people could find the arguments and tools to use as a proactive way of building an evidence base, rather than being on the defensive for not having what people were thinking you should have because they were looking at treatment issues.

We included a very clear rationale for the importance of using evidence. We gave a comprehensive look at what can be done in a different way for using the evidence and an unapologetic definition or justification for why doing things differently is both valid and necessary. We have a whole appendix on alternate study designs in this report showing how you can get to a reasonable conclusion without having to use a randomised trial, for example. This is not to say that when you can use them (RCTs), they couldn't be good if designed properly, but we can't always do that. It describes the 'how' of actually applying this different approach. It provides links to existing evidence, resources of many types, and it is applicable to other complex health problems. We have case studies throughout the report and have encouraged people to give us other case studies from practice.

One of the case studies in one of the papers we published subsequently was thinking through the mechanisms, the “why, what and how” questions on sugar-sweetened beverage taxation (Chatterji, Green and Kumanyika, 2014). Also, Vivica Kraak has done two papers using the L.E.A.D. framework approach to gathering and interpreting evidence on whether or not the food industry and governments have been following the recommendations made in prior IOM reports about marketing to children and about schools and other interventions (Kraak, Story, Wartella and Ginter, 2011; Kraak, Story, Wartella, 2012).

There's also an example that we published in the journal, Preventing Chronic Disease, about generating evidence by evaluating a community based after school programme as well as an unpublished case by a master's in public health student who wanted to try using the L.E.A.D framework to assess the evidence related to her interest in sit-stand desks (Kumanyika, Brownson, Cheadle 2014). At the time there was actually a situation in Philadelphia where someone was considering offering sit-stands desks to staff; this student used the L.E.A.D. framework approach to make a case statement, a report, about sit-stand desks in an employer situation.

Implications? I hope I've convinced you that we can't just do what feels right or is politically expedient, and just throw the evidence out the window because it's too hard or too complicated to put the evidence together. We also can't have the paralysis of the analysis and spin our wheels because we don't have

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perfect evidence about what we want to do. We’re trying to find the sweet spot of using the best available evidence to answer the most policy relevant questions, and we have an obligation to do that while also creating some additional evidence.

In conclusion, here is a perspective on what I think is happening. There are studies in the psychology literature of stress related growth in various situations, how people who are traumatised in different ways can grow from that stress. I don’t mean to trivialise that at all, but I do think that this term that I might have made up, “methodologic stress”, is really what’s happened here. Because the message was, “you evidence people are a part of the problem. We cannot act because you’re telling us that data have to be collected in a certain way that doesn’t fit the problem and so we can’t go anywhere”. This persistent stress of “How do we use what we know about evidence and principles and logic to actually inform the solution to the problem?” forces us to think in different ways. It forces us to expand our paradigm and hopefully improves our ability to inform decisions that will improve the public’s health.

Thank you.

References


Professor Shiriki Kumanyaki

Perelman School of Medicine University of Pennsylvania Philadelphia Pennsylvania United States of America

Email: skumanyi@mail.med.upenn.edu

Shiriki Kumanyika is Professor of Epidemiology in the Department of Biostatistics and Epidemiology at the University of Pennsylvania's Perelman School of Medicine in Philadelphia. She is also Professor of Epidemiology in the Department of Pediatrics, Nutrition Section, at Penn. Her other affiliations at the University include being a Senior Fellow in the Center for Public Health Initiatives, Faculty Fellow in the Penn Institute for Urban Research, Senior Fellow in the Leonard Davis Institute for Health Economics, and affiliated Faculty in the Center for Africana Studies. Among her extramural affiliations, Dr Kumanyika is Co-Chair of World Obesity - Policy and Prevention (formerly the International Obesity Task Force), a member of the US Task Force on Community Preventive Services, and President-elect of the American Public Health Association.

Dr Kumanyika's major research focus over more than three decades has been prevention and treatment of obesity and diet-related chronic diseases in clinical or community settings. She has served as principal investigator or co-investigator on several randomised clinical trials or observational studies related to salt intake, other aspects of diet, or obesity and authored or co-authored more than 300 scientific and professional publications. A major theme in her current research is improving equity in food marketing environments in African American communities. In 2002, Dr Kumanyika founded the African American Collaborative Obesity Research Network (AACORN) (www.aacorn.org), a national network that seeks to improve the quantity, quality, and effective translation of research on weight issues in African American communities. Dr Kumanyika has a long history of providing policy guidance on public health nutrition issues to health agencies and organizations in the USA and abroad. She was Vice Chair of the US Health Secretary's Advisory Committee on National Health Promotion and Disease Prevention Objectives for 2020 from 2008-2011, and has been a nutrition advisor to the World Health Organization Department of Nutrition and Human Development for more than 10 years. Dr Kumanyika has received numerous honours for her research contributions and is an elected member of the Institute of Medicine of the US National Academy of Sciences.

Dr Kumanyika's plenary lecture discusses US obesity prevention efforts from the perspective of evidence-based public health. She highlights findings from an Institute of Medicine consensus study that focused on ways to improve the evidence base to inform obesity prevention policy decisions. Dr Kumanyika also discusses here specific challenges encountered when attempting to gather or generate evidence to inform solutions to obesity-related health inequalities.
Good government and population health: Tussling politics, industry and NGOs

Michael Moore¹
(mmoore@phaa.net.au)
¹Public Health Association of Australia, Canberra, Australia

Issue
As governments across the world oscillate from the centre to the right of the political spectrum industry argues that there are too many regulations, too much red tape and too much interference by government. On the flip side, many NGOs seek more regulation, increased taxation and tougher regulation in order to contain the excesses of parts of industry that are creating significant population health problems.

Poor health outcomes arise from increasing availability of alcohol, increasing obesity and a constant ‘push back’ by industry on the regulation of tobacco. Good governments should be able to find ways to minimise the harms associated with these three main enablers of poor population health. The speaker, Michael Moore, will discuss his own experience of the influence of industry on government and the different ways in which NGOs and government can engage to achieve better health outcomes.

Main points
By drawing on examples such as: the Food and Health Dialogue and the Health Star Rating system; the role of the National Alliance for Action on Alcohol; attempts to introduce a Needle and Syringe Program into the ACT gaol; and efforts by Big Tobacco to remain influential; the speaker will identify the extent to which government should engage or stand up to industry for better population health outcomes.

Moodie et al in the Lancet argue NGOs should not work with the tobacco, alcohol and the junk food industry if there is going to be appropriate protection of public health. Industry argues that business friendly ‘liberal’ governments should not “interfere” but should leave businesses as much freedom as possible. An understanding of freedom and the difference between interference and domination, as published by Pettit, provides a foundation for achieving better government and better population health outcomes.

Parts of industry have been hugely effective in influencing governments. It is important to have a nuanced understanding of what happens in government and the role of NGOs in achieving gains in population health in areas such as plain packaging of tobacco products, increased taxation on tobacco and alcohol and the role of collaboration with industry to reduce sugar, fat and salt in food.

Conclusions
Voluntary codes do play a role in containing the excesses of the vast majority of industry. However, there are times when it is appropriate to use regulatory methods, including legislation, in order to achieve the best health outcomes.

Implications
This paper uses an understanding of political philosophy, political experience and engagement with NGOs to provide an insight into the role that population health practitioners might play to influence governments, to counter industry lobbyists and to build networks of common interest to achieve better population health outcomes.

References

Michael Moore is the CEO of the Public Health Association of Australia. He is the Vice President/President Elect of the World Federation of Public Health Associations. Michael is a former Minister of Health and Community Care and was an Independent member of the Australian Capital Territory Legislative Assembly for four terms from 1989 to 2001. He was the first Australian Independent Member to be appointed as a Minister to a Government Executive and became the Leader of the House.

Michael is a former teacher, consultant and small business owner who holds a post-graduate diploma in education, a master’s degree in population health from the ANU, is an Adjunct Professor with the University of Canberra since 2002 and is widely published. He is a PhD Scholar at the University of Canberra examining a framework for planning or evaluating health advocacy. He is also a political and social columnist who has served on a range of Boards including as President of the Rotary Club of Canberra, on the ACT Local Hospital Network, Australian Health Care Reform Alliance, the National Drug Research Institute, the Institute of Public Administration and as Chair of the ACT Asthma Network. He has received a number of awards for his work in health policy, particularly around drugs and alcohol and received the AIDS Action Council President’s Award in 2001.

Public health advocates face many challenges in attempting to persuade governments and the public of the importance of public health interventions. Some of the success stories such as the plain packaging of tobacco, restrictions on alcohol and front of pack food labelling need to be celebrated. However, shallow understandings of the social determinants of health and resistance from big business as they cry “Nanny State”, and use their power, finance and influence to undermine public health initiatives are difficult to counter. Michael will use discuss the techniques that have the best chance of success in attempting to win the hearts and minds of the community and with it their politicians and governments.
Epidemiology, Population Health in the Afterlife

Kirk R. Smith¹
(krksmith@berkeley.edu)
¹School of Public Health, University of California Berkeley, USA

I am addressing one of the most difficult challenges we have, which is how to deal with the health implications of climate change. The particularly difficult part is that the reductions we need to make now in our emissions will not cause any major changes in the trends in climate for decades hence. So it's the ultimate inter-temporal disconnect. Disconnects are not all that uncommon in health, after all, we accept the life course idea that do we improve the health of children not only to protect them directly from diseases that affect them as children, but also to improve their life course, to reduce their risk of diseases in the long term. Indeed, the term life course e.g. seventy years, is not too different in scale to the temporal disconnect we have with climate change.

I was very happy to see the ceremony that we just had, which presumably was something along these lines: 'I show my respect and acknowledge traditional Ngāti Whātua customs/custodians of the land and also the elders, past and present.’ This is not a common thing to do in most of the world, but I have seen it here and in Australia, and I’ve actually started to do it a bit in the United States and it relates directly to my theme.

I also want to acknowledge my allies and elders that have been an important part of this lecture. An elder colleague and friend who is much on our minds now is Tony McMichael, who should be here at this meeting but passed away just ten days ago - a true giant in the field and an important mentor to many. I start from Tony’s book, Planetary Overload published in 1993. A review in the Journal of Ecology stated, “Everyone who is concerned about leaving negative legacy to future generations should read this book”.

This notes the premise behind this book and many others of this kind, which is that the future should matter. But does it matter to people, and how much? That's what I address starting briefly with the economic view, but then move quickly into the view from moral philosophy, because I think it has much to inform what we do as scientists in this field.

Pigou, the famous economist, writing in about 1920, coined the term: “defective telescopic faculty”. Although having no philosophical basis, he said, people do not value the future as they should. In other words they devote too few resources to doing things that would have benefits in the future. I think many of us would agree, but he says it's just sort of our nature to do that.

Paul Samuelson, the Nobel economist, went further to state that the Golden Rule of Investment is to select the value of the variables under your control that maximises the present value of the investment account. In other words, choose the amount of investments that will maximise the present value. To do this, take costs and benefits that occur in the future and collapse them back to the present, using, in most economic analyses, a discount rate - a percentage per year.

This all works okay in the general economy as long as one is dealing with things over a decade or two, perhaps, but it falls apart when we start talking about very long-term impacts - such as climate change. Even at modest economic discount rate, say 6%, the costs and benefits in the far future don't count much for today. $100 in 2100 for example would only be 50 cents per day. Even the so-called natural discount rate, related to how your genes propagate (half your genes in your children, a quarter of your genes in your grandchildren, and so forth) heavily discounts the future. This is roughly a 3% annual discount rate across generations, but still produces little in the way of valuing impacts 100 years from now.
The near-term dominates and this has led to a lot of successful economic activity. But can we look at climate change and other long term effects in the same framework? The two major economic analyses of how much we should spend to avert climate change done by two prominent economists, Lord Stern in Britain and William Nordhaus at Yale University, came to opposite conclusions. Both used a present value of framing but at 0.1%, a low discount rate, Stern found that it was well worth investing today to avoid climate impacts in the future. But Nordhaus, at 3% which is still low for economic analyses, found that it was not worth much effort today. There are other differences between these two analyses but nevertheless discount rates were by far the major single difference. Discounting does make a difference, but there seems no intrinsic way of choosing one for all circumstances.

I now will shift gears entirely to look at philosophy. If you have an interest in this approach, I recommend Samuel Scheffler’s relatively new book called Death and the Afterlife. The reviews of Scheffler’s book said that it is probably the first time in centuries that a new subject in philosophy has come about. He did not have to review what people had said in the past, he invented his own field. As you may know, moral philosophers, somewhat like theoretical physicists, tend to think in terms of counterfactuals or thought experiments, such as the Gedanken experiments used by Einstein. These push us to try to understand what we mean by what we say and what our values really are. I have renamed Scheffler’s thought experiments here to three.

Number one is the “Human Condition”. In time you die, and everyone you know dies, I don’t think anyone would argue with that even we would like to. That’s the human condition now.

He then proposes condition two, which I call the “Patient Asteroid”. In this thought experiment you come to believe that thirty days after your natural death an asteroid would strike Earth and destroy everything and everyone on it. Would this change your behaviour? You could live out your natural life and no one else would have to know that this was going to happen. Would it change what you do? Would you work on a cure for cancer? Or worry about climate change? Or do a vitamin D trial, if you knew this was going to happen? But you might demur by saying this would be distressing because although I could live my natural life out, I know my friends and family would be dying thirty days after I die, so that would change my behaviour.

So then let’s go to Scheffler’s number three, which I call the “Empty Crib.” This is that humanity becomes infertile - everyone alive has a normal lifetime, all of you, all your children, everybody you know, but no new children are born – humanity would end. Would that change what you do and value today? Scheffler, in short, argues it would change everything profoundly. This is the plot of a science fiction book called Children of Men by P.D James written in 1992 and made into a movie a few years ago starring Clive Owen. In this story, through some unknown reason - disease, pesticides, cosmic rays, or whatever - humanity becomes infertile, and no children are born. So everybody is slowly getting older together. The youngest child becomes a superstar because he is the last one born.

It changed life profoundly. From the novel: “Without the hope of posterity for a race, if not for ourselves, without the assurance that we being dead yet live, all pleasures of the mind and senses sometimes seem to be no more than pathetic and crumbling defences shored up against our ruins.”

Scheffler takes this further, James’ speculations invite us to consider the possibility that our conception of human life as a whole relies on an implicit understanding that such a life is in itself occupying a place in an ongoing human history, in a temporally extended chain of lives and generations, extending from the past - thus my slide and the ceremony in this room - but also into the future.

If this is so, then perhaps we cannot simply take it for granted that the activity of say, reading a great book or trying to understand quantum mechanics or even eating an excellent meal with friends would have the same significance in people if the world was known to be deprived of the human future.
The afterlife Scheffler talks about is not the personal afterlife, heaven and hell and all that, but what we in public health would call the population afterlife and he calls the collective afterlife. That we assume, even if subconsciously, humanity is going on in the same way more or less, as it has in the past. That we are in a continuum that gives meaning to the things we do, even though they may not reach fruition during our lifetimes, developing cure for cancer for example. We can see it as a part of a continuum of improvement and progress in the human race in which we have a role. Without this Scheffler notes “Like the biblical Moses denied access to the Promised Land, we stand gazing through the lens of shared values and history toward a future we will not enter.”

What about the human condition, the condition we are in? He notes:

Every single person now alive will be dead in the not too distant future. This fact is universally accepted, it is not seen as remarkable, still less than impending catastrophe, there are no crisis meetings about it, no outbreaks of mass hysteria, no outpourings of grief, no demands for action, because of it.

This does not mean that we don’t fear our own death. Many people do, they are terrified of it, but the recognition of our own mortality and of the prospect that everyone now alive, everyone in this room will soon die does not lead most people to conclude that few of their worldly activities are important or worth pursuing.

Why is that? Because we believe in the afterlife. The population afterlife.

So now the afterlife conjecture itself:

The fact that we and everyone we love will cease to exist matters less to us than would be the non-existence of future people whom we do not even know and can’t even determine who they are, their names or where they are. We depend on that afterlife to give us meaning today, but more positively, the coming into existence of people we do not know and love matters more to us than our own survival and the survival of people we do know and love.

Because we know that everyone we know and love is going to die and yet we live our lives and work on long-term things anyway. It’s because we intuitively value the afterlife even more than we are concerned about now. He’s arguing, in a sense, for an inverse discount rate. That we value the future more than the present.

So what does it say about discounting? He does not use that word exactly, but says:

The fact that under certain respects we care less about our own survival than about the survival of humanity shows something important and insufficiently appreciated about the limits of our egoism.

Egoism here might perhaps be represented by maximising present value. Indeed, it is about as egotistic as you can be. Scheffler goes further:

The point has not been hat we are more highly altruistic than we thought, to advance the interests of future generations, but rather that we are in certain ways more dependent on the future than we thought. We find this surprising, less because we’ve been blinded to our own altruism, but because we’ve over-estimated our independence and self-sufficiency from that continuum.

Our place in the historical continuum has been approached by other writers and philosophers, for example Franz Kafka wrote an allegory published in 1924 after his death called “He”, in which the protagonist is on a road of time and finds value in using the future as an ally in battle with the past, that things have to change and we use our estimates of the future to beat down things from the past. But he also turns around to battle the future using the past as an ally - “He” lives in a continuum.
What about the past? I’m not going to talk too much about, the “before life,” but there are many traditions, like the one we participated in today, that do recognise it directly. The Mexican Day of the Dead is an example, when for a few days people honour the people in their past, a valued part of their lives today, including having objects in their houses representing them.

The paradox is in order to feel responsibility to the future; you have to feel some control over it. After all, if we sacrificed today to do something about climate change or anything else, but then the next generation says, “to hell with it, we’re just going to do what we want to do, e.g. maximize our own present value”, then our sacrifice is lost. We have to feel that we have our influence extended into the future in order to actually feel some responsibility for it.

The only way to do that, ironically, is to feel some control from the past. If we cut off all influence of the past through our actions then what is to keep the next generation from doing that? We have to find a place and a way of dealing with this continuum. We must feel somewhat bound in our place. Now obviously there are limits, you can’t be completely bound by the past, but nevertheless institutions that bind us to the past paradoxically also help us to deal with the future - allies for Kafka’s protagonist, “He.”

Perhaps the greatest example of our times was the Truth and Reconciliation Commission in South Africa after the fall of apartheid. They attempted not to punish for the past, but to reconcile with the past. What an immense achievement that was – but not easy.

Let’s turn now to climate change. Figure 1 shows the Representative Concentration Pathways (RCPs) - scenarios - used in the recent IPCC (Intergovernmental Panel on Climate Change) assessment. RCP8.5, for example, is in terms of watts per square metre by 2100, which will occur if we continue on the course we are on. This would be about six degrees globally above the background temperature of late last century, even higher against pre-industrial times, but with a large range of uncertainty. Why 2100? Because most of us have ten fingers? Although there is nothing special about the year 2100 we do need benchmarks.

**Figure 1: Representative Concentration pathways Scenarios used in IPCC Assessment**
There are basically three periods of concern in the IPCC analysis. The first is how much warming has occurred up to now - not that much actually, which makes it hard to see significant impacts on health or anything else, yet. There is much natural variability in the climate and although there is an apparent increase in warming but to see impacts that are outside the variability is difficult, even more so to attribute them to human caused changes in natural variability.

Second there’s the period up to 2050, for which you might run a malaria model or some kind of health model, for example heat stress, to obtain estimates of what might happen. But you’ll notice that no matter what we do and no matter which pathway we take in terms of greenhouse gas control over the next period makes little difference up to 2050. We cannot change much in the next period; we have to deal with this amount of climate change no matter what we do because of the inertia built into the climate system. This is the era where adaptation must dominate our health response.

What we do now starts making a big difference by 2050, however, particularly by 2100 and out even further - a much larger difference. Thus, we have obligations as health scientists to point out the need to make changes now to reduce risks 40 years away - perhaps big risks.

To me the most alarming thing about RCP 8.5 is the slope. That in 2100 we’ve hardly even begun to feel the full effects of what we’re doing but we are on a steep upwards trajectory - see where RCP8.5 crosses the 2100 mark. We are on our way to something uncertain but possibly a very different planet after 2100.

The global mean is also misleading. Figure 2 shows the average temperature in the late 20th century in North America and what it might look like under the RCP8.5 scenario in the late 21st century. The temperature changes are worse in the higher latitudes and since the northern hemisphere has a lot more land in higher latitudes, the changes are bigger than they are over the ocean.

**Figure 2: Difference in temperature between centuries**
Globally, while the average might be a 6 degree increase, the average over land will be something like 8 degrees and the average over the Arctic will be 12 degrees. So this is starting to look like a different planet in places and that’s the central estimate, not the upper confidence interval.

This raises yet another issue - given there are large uncertainties, is it right to plan based on the central estimate? Let me conduct an exercise with you that a close colleague, now passed away, Steve Schneider, did with adult audiences. He’d say “those who own a house, please raise your hand.” Okay, most of you. “How many of you have fire insurance?” Most do, good. “Now, how many of you have had a serious fire?” Only a few. “Well, the rest of you are fools! he would say. “Why are you wasting money on fire insurance? The chances are so low.” You know the answer – the impact of losing a whole house is too severe to handle and it is worth having the insurance to make it acceptable. That is the problem with climate change as well. It’s not a 100% chance that we’re going to see these extreme worlds, as far as our current science tells us, but there’s a good chance. Indeed, it is a higher chance actually than of having a severe fire in your house. Isn’t it worth paying for some insurance by limiting emissions?

So where is the limit? Obviously we cannot live on Venus at 460 degrees. But what is the temperature threshold between that on Earth - 14 degrees average now, and Venus? When most think of heat stress, they remember events like the big European heat wave in 2003, concentrated in France. Estimates are that 35-50,000 people died prematurely over a two-week period. But who died? Not you and me, but mostly old people who were living alone. The most vulnerable were affected, those who should have been protected by their society but were not.

I am not talking about that type of heat stress, however, but something quite different - stress related to ‘wet bulb globe temperature’ (WBGT). WBGT is an index mainly composed of temperature and humidity. As the WBGT goes up, your ability to work goes down. At 40 degrees and low humidity, you can sweat off the heat generated by physical work. At 100% humidity, however, you have kidney failure and perhaps die – even if you are a healthy young person. And why is it that? It is because our bodies are inefficient at turning food energy to mechanical work. If we produce 100 watts of work, we need to rid our body of 400 watts of heat energy. If the surrounding WBGT does not allow that heat to be released, our bodies shut down.

In the extreme climates shown by RCP8.5 we would find significant parts of the world, populated places, where it is not possible to work outdoors during much of the year. Now you might say, “I don’t work outdoors.” Currently, however, more than 60% of the planet works outdoors – mainly in construction and agriculture.

The risk can be reduced by changing work practices, but this produces a pernicious trade-off between health and productivity. If employers around the world say, “yes, you don’t have to work between ten and two, or you can skip work for the worst months in May, or the hot season”, then maybe there would not be many health effects. But there’d be major impacts on productivity and it is difficult to know how that trade-off would play out over the next decades. But it illustrates that there’s starting to be a change in what we expect as part of human life, or what we’ve experienced as part of human life in history.

We are becoming better able to predict WBGT using meteorological parameters that come out of the climate models. The health risks can be calculated even far into the future because they are based on basic physiology and thermodynamics, and sixty-year-old science. I do not know who the United States Army were planning to invade at the time, but they did a lot of studies back in the 1950s about the WBGT stress on healthy young soldiers. What we know, therefore, is about the healthy workers, not the most vulnerable. In the most vulnerable populations it would obviously be worse, a task for epidemiology to sort.
In New Zealand and in California we can afford to live in air conditioned malls, perhaps, and work in air conditioned farm equipment. But somebody has to build and repair those malls. And what about the air conditioning requirements and the climate change feedback from the power needed? And is living this way part of the continuum of human life?

What is coming? Few places on Earth now exist where people cannot work outdoors most of the time, with good work practices, but there’ll be more and more with global warming if nothing is done. When, in the major populated areas, it will be possible to only work outdoors in winter or at night, then only in the winter at night. Then what? When will it not be possible to go jogging or send your kids to play football or rugby? Where will the last summer Olympics be held, if you consider the Olympics has to be during the day and outdoors for some of the events? Or can we have it at night or completely indoors?

Science fiction has dealt with these kinds of themes. In one of the Alien movies, for example, there was a colony on another planet, an inhospitable planet. The humans lived indoors, however, and had a comfortable life (until the monsters arrived). We could build those on this planet, right? You might say air conditioned malls are a beginning. It is not the end of humanity, you might argue, it is just the next stage. Actually, the colony in Aliens might even be more prescient in the sense that it was terraforming, they put there in order to change the atmosphere of that planet into being habitable for humans. One of the things we may end up doing as well, is to run giant machines to take CO2 out of our atmosphere, one of the geo-engineering schemes being considered. Terra-reforming colonies, one might say.

Heat is not the only type of impact of extreme climates of course. What I’m talking about is where adaptation as we normally think of it is no longer possible. Obviously we’re not going to derive genetic changes in humans to live at some other body temperature besides 37 degrees in this period. Possibly we can for corn, but we’re a little unclear how much. Right now it doesn’t germinate unless it spends a significant period of time below 30 degrees. So corn will not be able to be grown outdoors in many parts of the world unless it changes substantially.

Huge increases in energy and moisture in the atmosphere from climate change resulting in extreme storms; adverse reductions in biodiversity; sea level; ocean acidity and so on. It is hard, actually, to figure out the health impacts - you can’t do epidemiology eighty years from now. Or predict the health care system or public health infrastructure that would make the vulnerable less so. But those are the challenge we have as scientists.

To be honest, climate models do not handle extreme scenarios well, particularly far into the future. They don’t agree and uncertainty bounds are large as you see in the figure. The extreme climates are low probability, although not that low. I used to work in nuclear safety, where we talk of a low probability outcome meaning one in a million. Based on current science and trends, the risks seem to be something like one in ten of these very extreme climates if we do not change our emissions. So how much insurance should we be buying?

But at least they’re far off in the future, right? Or are they? In our IPCC working group at a meeting in Argentina in 2012, one of our colleagues received a text that his granddaughter had been born in Tokyo. Japanese girl babies have the longest life expectancy in the world and thus Yue, this little girl, will very likely live to see 2100. She was one of the first members of the 22C Club - the 22nd Century Club at the time. but nearly every girl baby born later this decade in developed countries will also be members. Even Chinese and Indian babies born early next decade will live to see 2100. 2100 is thus the present, not the future. It is now in the sense that it is part of the life course of the people we are responsible for, today’s babies.

So when does the combination of severity and probability for severe climate change approach a threat to the world that we would value it as such that it exceeds the afterlife threshold - changes the meaning of our
lives today?. When we can no longer consider it a continuum of human life that gives our own lives value? There is of course a trade-off between uncertainty, severity, and date – if the severe event does not happen by 2100, it might by 2150 (or perhaps by 2080) or much more certainly by 2200. But these uncertainties are not large in the grand scheme of things – in the sweep of human history. And what about the difference between achieved and committed? That slope we see in Figure 1 was bad enough by 2100, but look where it was going, what we would have committed ourselves to if we do not change our ways. How do we incorporate that into our thinking?

So what can public health do? We are starting to think in the long term. For example, there’s little opposition now in most of the world to the idea that we have to stop teenagers from smoking. It is not because teenagers die of smoking, as their extra risk is low for many years. It is because they’ll die at sixty instead of eighty. Well that is forty years’ time in the future. That’s the kind of perspective we need in climate change.

We worry about teenagers starting to smoke also because they will become addicted. CO2 emissions and the lifestyles that we’ve come to expect from them have some of the characteristics of addiction as well. And the lack of investment in alternatives sounds kind of like keeping a habit that is easy, and cheap. Public health has been thinking about life course models to protect health. Perhaps we should focus on this approach to climate change rather than calling them intergenerational effects, which just makes them sound far away. Let’s talk about intra-generational- we are talking about protecting our own kids today. They need help with their life course planning, if you will, because under current trends, they face a good chance of severe climates when they’re adults.

A somewhat different angle on this problem is raised by another important recent book The Better Angels of Our Nature by Steven Pinker. A New York Times review stated:

The essential thesis of Better Angels is that our era is less cruel and more peaceful than any previous period of human existence. The decline in violence holds for violence in the family, in the neighbourhoods, between tribes, between states. People living now are less likely to meet a violent death or to suffer violence or cruelty at the hands of others than people living in any previous century.

This thesis is not politically correct in some groups who still cling to a pastoral myth about the past. Pinker, however, provides convincing evidence that could be considered as an epidemiologic approach by basically taking records of violence throughout history and putting population denominators to them. So yes, maybe only a few people were killed in hunter gatherer tribes but when considering the size of those tribes, the per-100,000 population rates were huge compared to today. And we’ve seen improvements even in the last decades. Sure World War II and the holocaust were terrible, but on a population basis not as bad as some of the events in the past, for example the Mongol invasions in the 1200s, the crusades, and so forth.

Frame these statistics as rates and its remarkable the sectors for which Pinker’s thesis is supported: war, crime, torture, terrorism, genocide, slavery, racism, riots, violent sports, animal cruelty, religious fanaticism, violence against homosexuals and women, child abuse, infanticide, burning witches, human sacrifice, and so forth. Major improvements across the board, and even though not uniform everywhere or in every period or that it is automatically to continue, we live in a much safer world than the past, even the recent past.

So why has violence declined? Government and trade are reasons. Not long ago, there were 500 princely states in Europe - fighting each other all the time. Now government has a stake in keeping violence in control, it has the monopoly on violence and suppresses violence among its taxpayers - it's bad for business and taxes. Feminisation, Pinker says, is another reason, although here the cause and effect is hard to establish, but clearly the feminising of society is associated with it becoming a less violent place. The rise of reason and rights, represented by the Enlightenment is another, illustrating the role of intellectuals and
the spread of literacy promoted by the printing press. And the final set of reasons relate to the spread of empathy. With literary efforts like Uncle Tom’s Cabin and Oliver Twist, people see what it is like to be a poor person in London or a slave. The spread of reason and empathy are things that we can work on as intellectuals and scientists.

So is climate change a form of violence? Pinker says no when asked as he defines violence narrowly as only trauma - one person chopping the head off another. There’s enough of that, to be sure, although it is going down. But if we believe our own science, the things we do today are producing trauma in some sense in the future, on our population. Admittedly it is indirect compared to a machete. But nevertheless you are just as dead if you die of heatstroke as you are if you have your head chopped off.

Maybe a stretch or maybe not? If we really believe our own science, the greenhouse gases we emit today will have an impact on the health of children today in their future. Can we use this expansion of the empathy and rights framework that Pinker says has been so important in human history up to this date. Can we expand this along distal pathways, i.e.to risks mediated by the climate system? To shift the discussion away from what we are not doing to help – sins of omission, of which there are many and do not motivate well – to a sin of commission – trauma we are consciously doing to our children? That shift would change everything, by altering the perceived moral character of our actions.

Thank you very much.

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*Unfortunately this author was not able to supply a complete reference list at time of publishing.
**Professor Kirk Smith**

Professor of Global Environmental Health
School of Public Health
University of California Berkeley, California United States of America

Email: krksmith@berkeley.edu

Kirk R. Smith is Professor of Global Environmental Health and founder and director of the campus-wide Program in Global Health and Environment at the University of California Berkeley. Previously he was founder and head of the Energy Program of the East-West Center in Honolulu. He serves on a number of national and international scientific advisory committees including the Global Energy Assessment, National Research Council's Board on Atmospheric Science and Climate, the Executive Committee for WHO Air Quality Guidelines, and the International Comparative Risk Assessment of the Global Burden of Disease Project. He participated, along with many other scientists, in the IPCC's 3rd and 4th assessments and shared the 2007 Nobel Peace Prize and is Convening Lead Author for Climate and Health for the 5th Assessment. He holds visiting professorships in India and China and holds bachelors, masters, and doctoral degrees from UC Berkeley and, in 1997, was elected member in the US National Academy of Sciences, one of the highest honours awarded to US Scientists by their peers. In 2009, he received the Heinz Prize in Environment and in 2012 was awarded the Tyler Prize for Environmental Achievement.

Professor Smith's research focuses on environmental and health issues in developing countries, particularly those related to health- damaging and climate-changing air pollution from household energy use, and includes field measurement and health-effects studies in India, China, Nepal, Mongolia, Mexico, and Guatemala as well as development and application of tools for international policy assessments. He runs the oldest and largest research program in the world focused on the energy, health, air pollution, and climate impacts of household fuels. This work has demonstrated that the highest exposures to air pollutants occur in rural, indoor settings in developing countries where biomass and coal are the principal fuels. He has documented the associated risk for pneumonia and adverse birth outcomes in children and cataracts, tuberculosis, heart disease, and chronic lung disease in adults. Since 40% of the world's population uses these fuels, the total health impacts of this exposure are estimated to be larger than any other environmental risk factor, estimated to about 4 million premature deaths annually worldwide.

In his lecture, Professor Smith starts by noting that climate change poses challenges to decision making because actions today have their most severe consequences in generations that follow rather than in our own. Using perspectives from the moral philosopher Samuel Scheffler and the social historian Steven Pinker, he explores how the shift of human values needed to make difficult and expensive decisions today to protect the future may actually fit existing trends and values in society. Scheffler's “Afterlife Conjecture” is that believable threats to even an indefinite human future would profoundly affect today's values, i.e., we in a real sense care more for the future than the present. Some future climate scenarios would place humanity in a world very much altered from today, i.e. threaten Scheffler's Afterlife and thus today's values. Pinker documents the worldwide reduction in violence in human history that is still spreading. Climate change will harm many groups not able to protect themselves - arguably violence by one group on another that could be ameliorated by extending Pinker's trend of violence reduction across time as well as geography. Insights of philosophers and historians as well as climate scientists and epidemiologist may be essential to learn how to change values in time to avoid the worst impacts from climate change.
Working with communities to improve population health

Michael Sparks¹
(Michael.Sparks@canberra.edu.au)
¹University of Canberra, Canberra, Australia

The International Union for Health Promotion and Education is the world's oldest and largest professional association for health promotion. We were founded in Paris in 1951 as a global organisation and we have a regional structure somewhat like that of the WHO. New Zealand is part of South West Pacific region. For the first time in IUHPE history, the leadership, both the regional Vice President and the Regional Director, are from New Zealand and I think that's something you should be very, very proud of. In fact, I think you should actually applaud the region. Sione and Louise are both here and there is a regional meeting tomorrow. It's a really good thing to acknowledge the strength of global leadership coming from New Zealand.

I'll get started with some definitions. What I want to do here is to basically make sure that you understand what I'm talking about when I make distinctions between population health, public health and health promotion. So population health, I've taken a definition from the Public Health Agency of Canada. It says that population health is an approach to health that aims to improve the health of the entire population and to reduce health inequities among population groups. It looks at and acts upon the broad range of factors and conditions that have a strong influence on health which we would call social determinants.

Now public health is all the organised measures to prevent disease, promote health, and prolong life among the population as a whole. It comprises activities aimed to provide conditions in which people can be healthy, and it focuses on entire populations, not on individual patients or diseases, thus public health is concerned with the total system and not only the eradication of a particular disease. So you can see with these two definitions that they are actually saying a lot of the same things. And they're certainly going in the same direction. So it's not surprising that a lot of people use these terms interchangeably but what I'm really focusing on is the health promotion aspects of population health, or public health. In my writings and publishing, I have usually talked about it in the context of public health, because that's how, in Australia, we define it. So I'm saying that they are certainly compatible with each other and there shouldn't be any big surprises in any of that.

I came up with a model of integrated public health to demonstrate what I think is going on in good public health in the 21st century. Health promotion, disease prevention and health protection are all equally important. They all have overlaps, health promotion impacts on disease prevention, and health protection and vice versa. What I'm going to be talking about today, working with communities is the heart of the sector because working with communities, in public health or population health, if it's done properly it can have a strong impact on the efforts that we do to prevent diseases and to protect health as well. And of course, around health promotion, disease prevention and health protection you need a supportive infrastructure. This is something that's absolutely essential - to maintain all of those.

One of the great challenges in public health is to make sure that those are all in balance, that they all stay together. That we don't put too much emphasis on one and not enough emphasis on another. In tough financial times it's increasingly common to see health promotion budgets being cut back and diminished and I think that we do that to our peril. We really need to think about the way that we balance those things and the balance doesn't mean necessarily that the effort and the income and the time that we have in terms of staffing and training is the same, it means that it's fair. That it's fairly distributed among the three.

So, why should we work with communities? What does any of this have to do with health promotion? What does any of it have to do beyond health promotion with public health? Well if we look to key documents that
exist at a global level and I really need to make it clear that I’m not talking about New Zealand specifically, I’m talking about global experiences in this. So, we should be working with communities for a range of reasons and we have been working in communities in public health and health promotion for a very, very long time, but if we need to have some justification for why we do it, we can go back to a document called “The Declaration of Alma-ata”, which is the product of the world’s first global primary health care conference held in 1978.

Alma-ata was, as I said, focused on primary health care, but it told us that we need to address primary health in the community, providing promotive, preventative, curative and rehabilitative services accordingly. It also told us that in addition to the health sector, all sectors were necessary, and community development was critical - in particular, community development around issues like agriculture, animal husbandry, food, education, housing, public works, communication and other sectors. That those were all important, but that the community was at the centre of those things. You work with those sectors because they have an impact on the community and the community likewise should have some kind of an impact on those sectors.

The last thing from the Alma-ata Declaration was that primary health care requires and promotes maximum community and individual self-reliance. This is important because it’s not just doing what some document of that day used to do, and that was say that everything is down to the individual: it’s all about behaviourism, it’s all about telling people what to do, or what not to do. Alma ata is saying that there is a community dynamic that is important, if you’re going to successfully deliver primary health care.

Then the seminal document in health promotion, which was the Ottawa Charter came about from Canada in 1986, at the first global conference on health promotion. If we look at the symbol you’ll see at the extending arm that goes the furthest out - strengthen community action. Now the strengthening community action is the biggest of those arms. It extends beyond the building of public health policy, which is the outer red line. It’s linked to the development of personal skills because as we develop the skills of significant numbers of people that has an impact on enabling and creating capacity within the larger community. You also notice in that creating supportive environments. Again that’s a little bit underneath the community, the idea is that it’s supportive of the community and the community’s action. And if we look at the bottom, the reorientation of health services that’s the base upon which all of these things lie.

Around it all is the building of healthy public policy because good public policy, as we know and as is increasingly emphasised in the modern day, is necessary to support all of the actions that are involved in all the other parts of the Ottawa Charter. And in the little circle in the middle, it gives us three words that are the key words of action for health promotion; that we need to enable, we need to mediate, and we need to advocate. Knowing that those three words are there is really important. We will often, particularly when we’re teaching health promotion, tell people, "you’ve got to learn the five action areas, they’re really important". But I think it’s really important to also acknowledge that those three action words are important and we as health promotion professionals, we as public health professionals, population health professionals, need to know what it means to be able to enable. We need to know what it means to be able to mediate, and to advocate. We need to be clear about what we are enabling, with whom we are mediating and for exactly what we are advocating.

Working with communities to enable them is helping them develop capacities to do things for themselves, to express a voice, to express a culture, to express a priority over what they want. Mediating is coming between the community members themselves and forces that are causing them harm, working with those other forces whether they are in the government sector or the private sector, in the physical environment or the social or cultural environment, to make sure that the negative impact is eliminated if possible and otherwise minimised. Advocacy is helping people in communities to understand that they do have a voice, they have a right, and to help them to articulate that voice, that vision, what they want for the future, and what their priorities are.
The Ottawa Charter said that it talked about community action, it talked about empowerment of communities. It specifically talked about community development, the development of communities. I noticed that there was a development in politics in New Zealand that I watched last night, that the portfolio of Māori Affairs has been changed to Māori Development. Māori Affairs sound a bit twee, a bit old fashioned. I thought it was quite an interesting change, because I understand what development means and development is... if we think of the Māori community as a community that can be developed, I think that’s a positive thing, at least it sounds positive to me. I can’t say with my hand on my heart that I know that much about the intricacies of New Zealand politics, but it sounded like a positive development to me.

And the Ottawa Charter also tells us that we need to accept the community as the essential voice in matters of their health, their living conditions and their wellbeing - who knows better than the community itself? And that we need to be able to enable and mediate and advocate so that people have that voice and that that voice gets listened to.

The last of the key documents that tell us why we should be working in communities is the World Health Organisations Commission on Social Determinants of Health. Their final report was called “Closing the gap in a generation” and it said, “In a globalised world, there’s a need for governance that’s dedicated to equity and that applies equally to the community level as well as to global institutions.” So what this document is saying is that we need to not only think about the big power levers and how we’re going to deal with multi-nationals, but we also need to keep in mind the importance of communities. It’s not throwing one out in favour of the other, it’s saying that you really need to be looking equally at both levels.

It also says that reaching beyond government to involve civil society people and voluntary and private sectors is a vital step towards action for health equity. That if we don’t engage civil society, private sector, volunteers, then we’re not ever going to get to a more equitable health outcome for populations. The increased incorporation of community engagement and social participation in policy processes helps to ensure fair decision making on health equity issues.

This is really important, particularly as we start seeing a move at the global level and with WHO, particularly towards the actions that are associated with health in all policies. We start moving away from the individual, moving away from the community, to that policy level where we start making laws and regulations and we start trying to use that leverage to have an impact on a broad range of people. And of course it’s being done because it’s seen as having the most impact. You can have the greatest impact on the greatest number of people and hopefully upon the greatest number of health outcomes if you engage in a policy process.

But the WHO commission on social determinants of health says don’t forget the community in that process. It’s really important that you make sure that the people who are going to be affected by the policies are engaged in talking about what the policy is, coming up with the ideas, coming with solutions and flagging potential problems that might come up along the way. Sir Mason Durie this morning talked about the importance of community, community leaders and community organisations in New Zealand during epidemics in the 19th century. It’s no different today. If we engage people, if we get them working together for a health outcome, it will be a better health outcome and we know that.

I’ll move on to the next of the recommendations from the WHO commission. It says that community or civil society action on health inequities cannot be separated from the responsibilities of the state, of government. So we need to actually have community action and government action going hand in hand and working together. This guarantees that there’s a set of rights and responsibilities, but it also ensures that there should be a fair distribution of essential material and social goods among population groups. In the real world we know that this doesn’t exist yet, and that we are all taking efforts to try to get it to happen, but a world that has a greater, more even distribution of material goods and social goods is a world that we
know will be fairer. The Commission also said that top down and bottom up approaches were equally vital. That one did not have dominance over the other nor was there a preference for one type over the other, so you still have plenty of room for people's movements, you still have room for political leadership and policy making - but there's room for both in the world and that's a good thing.

The commission also said that grass roots advocacy, service and programme provision and performance monitoring - each of those is a separate responsibility that can be taken on by the community. Civil society actors from the global to the local levels constitute a vital bridge between policies, plans and the realities of change and improvement in the lives of all. We have plenty of movements where there've been grass roots advocates around environmental issues, as well as around particular health issues. We've seen that since the beginning of the 20th century.

Service and programme providers are also members of the community. We mustn't separate out in an artificial delineation, the idea that each of us is a member of a community, or of multiple communities. And we need to remember that, even when we're wearing our work hats. We can think about how we can best serve the communities that we represent and that we are from, through the provision of our services and our programmes.

Performance monitoring is really quite interesting. The Framework Convention on Tobacco Control saw a lot of grass roots movements come up to support tobacco control all across the world. They saw a lot of programmes being provided by community members in tobacco control, but they really also saw the development of an interesting new thing, in my experience, of monitoring what governments were doing, monitoring what companies were doing, and reporting that in a global way. So civil society - the general members of the community - actually took on a role where they were doing something new and different, they were actually keeping track of what good things were happening, what bad things were happening and they were putting that into an evidence base that was able to be used to judge how well or how poorly policy implementation was actually taking place. It still happens in a lot of countries and the Framework Convention on Tobacco Control actually encourages it to happen.

But what does all this mean? We know from all these documents that we're supposed to be working in communities, but what does it actually mean to work in a community? I define community as any group of people with a bond or a link who willingly interact with each other for common objectives. It's important to understand what I mean when I say communities. I think that we can define communities in two main ways; either through a social definition, or through a geographical definition. The social definitions include things like kinship, geography, identification, ethnicity, language group or shared interests. It can be a group of people who get together to engage in the same hobby, the same sport, it can be people who have the same sexual orientation, it's a community based on identity. It can be an extended large family, it can be a group of people who share the same kind of ethnic background.

Likewise, geographical communities are able to be distinguished quite clearly, usually around some kind of physical border, some kind of geographical boundary. The interesting difference that is important to note is that geographical communities are often thought of as heterogeneous. We often think that there is a lot of diversity in a geographical community. We have to find out what people think and what the dominant opinions are and what the minority opinions are in geographical communities, but often we mistakenly assume that social communities are going to be alike, that they're going to be homogenous, that they're going to have the same viewpoints. In my experience that is not at all true. There's just as much diversity in viewpoint, in capacity and in priority in a social community as there is in a geographical community. We cannot assume that there exists such a thing as the community's issues that are universally accepted in that community.
In Australia we often hear about the Aboriginal community and I rail against this because in Australia there is no Aboriginal community. There are many Aboriginal communities in Australia, and believe it or not, they don’t all think alike. They don’t all agree on things, they don’t have the same language, they don’t have the same practices. How could we make the mistake of believing that there would be one set of dominant concerns in that community without asking them? Without talking to them? Without getting to know what their concerns were and how they wanted those concerns to be acted upon.

This is a word gram from an article about community groups and if you look at it there’s some interesting words that pop out. You get certain kinds of communities. You get Greek community, Christian community, Spanish community, migrant, Aboriginal, gay, Jewish, Muslim, Buddhist... you get all different kinds of communities popping out. But you’re also getting things like group, groups, noise, lobbying, thinking, history, culture, arts... these words pop out when we talk about community because they’re all important to communities. People who are working in communities have a lot of reasons to be together.

So working in communities is about community development. It involves elements of traditional social work, it involves a huge health promotion field, but it’s really about going into a community and developing relationships. Appreciating and assessing the vision, the values, the assets, the culture, the needs, the priorities, the capacities - what the community can do, the resources - the things that the community has at its hands that it can use to do things that it wants to do, and the connections that that community has.

This really fits very nicely, I think, with Sir Mason’s Māori model this morning with the Southern Cross, where he talks about the importance of culture, environment, participation, lifestyles, leadership and autonomy. I think the word autonomy in what Sir Mason was talking about links really nicely with empowerment. If we have an empowered community, then there is respect for the autonomy of that community. There’s respect for the voice and the vision of that community. And I think that links really nicely with the autonomy concept that Sir Mason was talking about this morning.

There are lots of different things that we do that constitute working with communities. We often deal with community engagement - trying to get people to talk about what’s important to them, telling us why it’s important and what kinds of action they want to follow up. We do organisational development within communities, we work with communities to build their capacity to do things, to take control, to meet, to have a voice, to articulate a vision. We actually work on developing social capital. One of the projects that I worked on in the ACT was a project, Michael Moore is here - he was actually the Minister for Health at the time. We worked with a housing commission community to develop social capital because that’s what the community told us they wanted to do.

We started doing this by helping them build community gardens, to engage in community barbeques and what this did, this activity, this central activity that brought people together, what it succeeded in doing was bringing people out of their flats, taking them out of isolation, getting them involved in activities that they were interested in, that they said they wanted to do, but also activities that got them connected to other people in their community. We worked on this project for a couple of years. We expanded from flower beds in front of a few flats to a community garden. We made a decision that we would have this community garden, there would be a little shed, it would have a little cheap lock on it and all the tools would be there and we had lots of people say, "oh no, no, it will be vandalised, it will be robbed, it will be stolen from. You won’t be able to get away with that", and we said, “well, if it happens, we will replace it. Just give it a go.”

What we found was at the end of two years, not once had the little shed been robbed, or vandalised. The windows weren’t broken, there was no graffiti anywhere. People respected it because it was theirs and they knew that it was a shared resource. It didn’t belong to anyone; it belonged to everyone. We also found at the end of that two year period that the people had come together. They had organised themselves, they
had learned how to have meetings, they had done visioning workshops, and they had decided that what we were offering them was not enough. They wanted more, they had bigger dreams. They were applying for grants on their own initiative. They were getting a little bit of support from us - but not a lot.

This didn't cost a lot of money to do but it had huge benefits. At the end of two years we evaluated things that some people told us we were a little bit strange to be looking at. We looked at things like ambulance callouts. We looked at things like incidents of domestic violence. We looked at the number of kids who were staying at school and for how many years they were staying in school. We looked at educational outcomes based on their school reports. In every single indicator that we looked at, there was an improvement. Sometimes it was as dramatic as 50%, sometimes it was much more modest, but in every one of those indicators, from this small investment in a community around an issue that they had identified, which was capacity building, social capital, we found great benefits came.

So that's just another example of what can happen when you work in a community to build social capital. Sometimes we work to mobilise communities to get them to support or get behind something. That can be political mobilisation, it can be about environmental clean-up... there are many, many wonderful examples of that throughout the world. Someone mentioned this morning in the opening plenary the importance of faith based efforts. I know that in my own experience in working in some of the Pacific islands, if you want something to work well, you start working with the church leaders and the faith based leaders first and that will ensure that there is a healthy number of people who show up and that things do get done. It is something that is challenging for some people, particularly if they're of a different faith or if they don't profess to have any faith, but it's something that is important, it works, so we need to keep doing it.

Community housing was also mentioned this morning. We often work in community housing initiatives. We look at environmental projects, we look at urban renewal, building of houses, the refitting of houses, assets based community development is a concept that came out of Northwestern University in the early 90's a couple of academics there wrote up their experiences in what they called Building Communities from the Inside Out, and I will talk a little bit more about that later on. We also sometimes work on community economic development - trying to make sure that there are jobs and opportunities for the members of the community to engage in.

We also need to keep thinking about participatory policy making, because that is the flavour of the month. We are talking about social determinants and often the way that social determinants get addressed by governments is through high level policy making. If we want to engage communities there certainly are models for doing that in a participatory way. And also we often look at sustainability projects in communities. We can start with anything, there's so many entry points in working with communities. There can be a health issue, an environmental issue, it can be about the literacy, health literacy or basic literacy, education, skills development, an artistic or cultural entry point, it can be an anti-discrimination viewpoint. We can enter that way in a lot of communities, particularly in linguistically and ethnically diverse communities where there are issues that give cause for us to engage in anti-discrimination as an entry point because it is the thing that is most needed.

In some communities and some parts of the world, gender is still a very real issue. We often live in our countries - in developed countries - we often think that it's not such a big deal, but in so many parts of the world it still is a very big issue. There are sometimes generational issues. I was speaking to one of the young members of the audience earlier about the differences in the generations and how we need to make sure that we're being inclusive of the younger and the older and the middle generations.

Human rights is often a way of entering into a community. Social justice, engaging people politically, empowering them to do a particular thing, working on housing, sustainability... sometimes even the identity of a community. Working so the community can determine its own values. What are the things that
are important here? What does it want to go out and tell the world that it is? So identity can be a really important part of community development. Also, it’s always going to be about working with communities to develop their voice, their vision and the priorities that they want to tell the world.

This is just a model of community development that I like. It comes from the United States, from West Virginia. It talks about using the community to steer things, to drive things. The community is at the top. Community development - the processes are at the bottom, they support the development of the community. Sometimes that involves community coaching, sometimes that’s about engaging people, specifically around topics, and it’s about helping them to articulate where they want to be in the future, their vision. It’s about building their capacity to get there. Helping them to make the connections and to know how to do that. It’s about helping them to learn how to plan, how to evaluate, how to monitor.

You do all that through capacity building, leadership development, organisational development, the development of social capital and resources. Resources that exist within a community are often untapped and often when we go into a community we go with the attitude of, “what’s wrong with you people? What’s your deficiency? What’s missing? What do you need us to do?” If we go back to Kretzmann and McKnight’s idea of assets based community development, it turns this on its head and you go into a community and say “what are the things you love about this community? What are the strengths of this community? What are the assets of the community that you have that you could put to work to improve your own community?”

So it’s really turning that whole approach and instead of saying, “what’s wrong with you people?” saying, “what’s right with you people? What have you got going for you that you can use, that you can build on?” And that’s a model that I really like a lot. Kretzmann and McKnight ran workshops in the early 90’s in Northwestern University which is in Chicago and they did specific workshops on various aspects of community development, including community organising and it’s just interesting as a footnote that their most successful graduate was a young man named Barack Obama, who went on to work in community engagement and community organising in the suburbs of Chicago. He later went on to run for political office, I’ve heard.

So why do we work with communities? Well we do it because we know it does work, it can be effective. It gives communities a sense of strength and empowerment and with empowerment comes health benefits. We know this through decades of research. Communities know their own needs and their own priorities best. The worst thing you can do is go into a community and say, “well we know from the stats what’s wrong with you and here’s what you need.” That’s the worst thing we can do. We need to go into the community and, you might well go into a community and say “the stats say this and it looks pretty bad. How does that resonate with you as a community? Is that the most important thing for you?”

An aid agency working in an island community was told to go into the community and work on diabetes. They went into the community and were told that the community wanted to work on alcohol and domestic violence. They worked on alcohol and domestic violence and got around to diabetes in the second and third years. They had success on all fronts. It was what the community wanted. So if you follow their lead, the community knows what it wants.

The other thing that’s important is that communities can help to achieve that individually focused activity. When we have health promotion, social marketing telling us to stop smoking, not to drink too much, to eat better, and community based activities can actually help to reinforce that. You can start to change the ethos of a community, the values of a community. I remember when I was working in ACT Health in Canberra, we had in around 2006 a secondary school alcohol and drug survey that came in. For the first time it said, and this was a survey of high school kids, “smoking isn’t cool.” A social change had happened among those people and they said for the first time that smoking isn’t cool. So we noticed a social change. Sometimes that kind of community engagement can work.
And the last point is that political will and policy support or change among policies changes over time. We know that we have swings between progressive and conservative governments. We know that that happens all over the world and there’s not much that we can do about that. But if we find that a progressive government wants to put in policies and a conservative government gets in next and they want to change those, it really defeats the purpose. So the reason you work with communities is to make sure that those values that support the policies stay alive in the community and that the community lets the political people, the political powers that be, know what’s important to the community.

We know that effective population health is responsive to the context in which it’s applied. If you don’t know your community, you don’t know your context. If you know the way that the community works, it function and its dysfunction, then that will help you to shape the intervention that you’re trying to implement in the community. You don’t do the same thing in the same way with every community, you have to be able to tailor the work to the needs and the capacities of that community. Unless you know those people, you don’t know their characteristics. You don’t know what they’ll wear, what they won’t wear, what they’ll put up with and what they won’t put up with. If you don’t know the community and you don’t have respect for the people that are in it, then you will never be able to effectively understand their priorities and work to achieve those.

Good community development leads to improved community health. I have at the end of the presentation a series of references and you can look up the WHO Euro reference for examples of healthy cities, the health cities movement, the worldwide movement and there are plenty of examples from there. The assets based community development model that I talked to you about started out with some urban renewal projects in Minneapolis. There are also some references for the UN Unite for Sight projects, case studies and links to some of my own and others’ thoughts on community development to improve health outcomes.

I’m sure we’ve all heard about the Nobel Prize winning Grameen Bank project, the low cost loans being given to poor community members, usually women, to empower them to do things for themselves. There’s also an interesting project in Brazil around community development, gender equity, agricultural development and risk reduction in times of drought, that’s presented in one of the PowerPoint presentations. So I’m telling you a lot, and I’m trying to give you hooks and examples so that you can actually go and look up some more of these things for yourselves as much time as I have, I don’t have time to go into all the details of those.

The last point that I want to make is that the current population health approach really is moving towards what I call the two pointy ends. Individual behaviour change, social marketing, the management of chronic diseases. The service provision that’s tailored towards individuals, individually focused health education, and taxation which applies as a policy rule but to people who smoke. So those are individually pointed behavioural change actions that we do in population health. I’m not saying there’s anything wrong with it, I’m saying that the current trend seems to be that we are doing that, or we’re doing the policy focused approaches. We’re trying to change policies that have huge impact.

What I’m trying to say is that community needs to be in the middle of that. So why don’t we work with communities? Well because it requires a lot of time. It often is resource intensive and sometimes the health promotion budget is the first thing that gets cut when we have economic constraints. But it’s still important. It’s often assumed that community development is somebody else’s responsibility. It doesn’t affect me, it affects somebody at a lower or at a higher level of government. It doesn’t affect me in my university because we’re not really doing research on that. It’s somebody else’s job. But really there is a collective responsibility for ensuring that it does happen.

Some people think that it’s old fashioned and some people think that its social work, not health, but I would argue very strongly that it’s the core of health promotion, working with communities. We have challenges
ahead of us, one is maintaining that focus on community based work, when we're faced with those other two extremes of individual and policy making. Another is utilising community efforts to identify and address social determinants of health in vulnerable communities. I’m not saying we have to roll out full scale community development projects in every single community in the world, let's start with the ones who need it most. Let's actually start by identifying those vulnerable populations and working to identify the social determinants of their health. What do they want us to work on? How can we actually put our shoulders to the wheel to help them achieve that as a vulnerable community?

We need to mobilise communities to participate in policy making if we're going to go with the global trend towards health in all policies, we need to make sure that the people who are going to be affected by those policies have a seat at the table and a loud and clear voice at that table. We need to link those individually focused health efforts to community based action so that they can be more effective, and we need to understand that we have to keep all these balls balanced at the same time.

That's all I really want to say about working in communities other than I will say that here is a role as Mason said this morning, it’s all there. It’s right in front of me. You are there, you are part of this. There is a declaration that's a product of this conference. Have something to do with the way it looks, what it says and the way it’s shaped. This is not an outcome, though. Don’t be mistaken that this is an outcome. This is a tool. This is something we can use to achieve outcomes.

It is fantastic, in my view, that the three organisations have come together in this congress and that they are working together collectively to advance this. Keep going with that, keep building the coalition, keep growing it. Make sure that you stand up to the political powers that be with your constituency behind you. Each of the organisations that have come together for this congress represent hundreds, if not thousands of people. Make sure when you advocate for the perspectives that are put in this declaration and the other work that you do, that you’re saying that. That you're talking about the people that are behind you. That it’s not just three people who are the heads of three organisations, it's actually hundreds and thousands of people behind you.

Work with communities to do it. If you are an academic, work with communities. If you are, I’ll give you a quick example of that, I work in the university, we had a community come to us and say, “We are doing great work with managing domestic animals in a remote Aboriginal community, but we don’t know, we don’t have any kind of evaluation strategy. Can you help us with that?” The first faculty they went to said, “No we don’t do that.” Second faculty said, “No, you’re too far away, we can’t possibly come up with a way of helping you with that.” Then they came to me and I said, “Well, it’s got challenges but let’s see what we can do.” And we've now worked together to create a coalition that can actually help to achieve that. There are lateral ways of thinking that help us to engage better with communities, that's the point I’m trying to make.

Take this declaration, take your professional associations, take your membership as members of civil society, your membership as members of community and move forward and don’t let us drop the ball. We have the ball now, let's run with it and let's achieve some goals. Thank you very much.
Michael Sparks

University of Canberra Canberra
Australian Capital Territory Australia

Email: Michael.Sparks@canberra.edu.au

Michael Sparks is President of the International Union for Health Promotion and Education. Elected to this position in Geneva in 2010, he was re-elected in Pattaya in 2013 and will serve until mid-2016. Prior to his election as President, Michael had served one three-year term as Vice President for the South West Pacific and one three-year term as Global Vice President for Strategy and Governance. Michael's other extended period of service has been as a nine-year board member of the Australian Health Promotion Association in which he served two one-year terms in each of the offices of Vice-President, President and Treasurer. Michael is on the editorial boards of several public health and health promotion journals and is Associate Editor of Health Promotion International.

Michael is an Associate Professor in Public Health at the University of Canberra where he is teaching and undertaking research into the contribution that health promotion makes to public health. Michael was a public health and health promotion practitioner, researcher, and manager for over twenty years before becoming a full-time academic in 2010. His areas of interest have ranged from drug and alcohol peer education to road safety to HIV/AIDS prevention, to tobacco control. He was the Director of Health Improvement in the Australian Capital Territory for seven years and represented that jurisdiction on a number of national committees in that time. He has undertaken numerous consultancies with the World Health Organization and several national health departments. Michael's recent publications have been on the role of health promotion in public health, the Framework Convention on Tobacco Control, Social Determinants of Health and Health in All Policies.

Michael is a married, father of two and is also an award winning actor and set-designer whenever he can find to indulge in his theatrical pursuits.
Improving Population Health in Aotearoa/New Zealand – a Pacific Perspective

Colin Tukuitonga¹
(colint@spc.int)
¹Secretariat of the Pacific Community (SPC), New Caledonia

Kia ora tatou, fakalofa lahi atu, talofa lava, malo e lelei, kia orana. I’m bound to forget some of your languages so please don’t shoot me down. I greet you in all the languages of the Pacific. Since I moved to New Caledonia, I’ve found out there’s eight hundred languages in Papua New Guinea alone, so forgive me if I haven’t greeted you in your own language.

Let me acknowledge Professor Sir Mason Durie, it’s just fantastic to share this stage with you and humbling of course, and congratulate the College of Public Health Medicine - why has it taken so long to honour Mason? And of course, lovely to see Papaarangi Reid again, and Philippa Howden-Chapman and Shanthi Ameratunga, a pleasure to share the stage with you. And I want to thank the Congress organisers for inviting me to speak. I had a little trouble trying to communicate with Michael Baker and Bruce MacDonald about what exactly it was that I was supposed to be doing. They kept wanting me to talk about Pacific models of health care and I’m thinking, “my god, there’s how many of them out there, and I’m just a Niuean from the Rock.”

I was asked to provide a report card on the Pacific - I’m talking about the Pacific folk in Aotearoa. And by the way, when Papaarangi Reid was talking earlier about her Auckland infrastructure challenges, I just wanted to scream out and say, “well actually in Melanesia, seven out of ten people have never had access to grid electricity and that’s fairly normal for people!” So I feel sorry for you, Auckland, for having two days with no power.

But in terms of the report card on Pacific New Zealander’s, I’ve put here, “could do better, a lot better” I hope over this talk to tell you why. But let’s acknowledge the good things first. I am particularly happy to learn that the gap between Māori, Pacific and Pākehā New Zealanders in tertiary education has been eliminated. There has been a marginal increase in early childhood education participation. Why am I focused on education? Because actually this is the greatest investment for health - it’s the great enabler, and that’s why I took quite warmly to these rather rare but encouraging signs in the education space. But of course there are some other positive developments- the immunisation coverage in Pacific families in New Zealand is fantastic.

But overall I’m afraid I don’t have good news. My reading of the literature from afar is that it’s pretty bad for Pacific New Zealanders. In terms of the indicators that have been used, many are static and some have deteriorated. And indeed inequalities are widening. A report from Victoria University, showed two thirds of the indicators they used in that report, from this year, have deteriorated. And the 30 % that has improved, it’s marginal. Like many in the Organisation for Economic and Co-operation and Development (OECD) countries, most seem to think that it’s the inequality in salary and wages that’s been the most significant driver of inequalities. In Aotearoa, we like to tell the world that we do well by our children. A recent report Our Children, Our Choice from the Child Poverty Action Group (2014) ranked New Zealand rather poorly against OECD countries on child wellbeing, in fact it was second to last.

And here’s a statistic that I picked out that’s really concerning. A quarter of all kiwi kids live below that magical line that people in Wellington use. And of course, behind these statistics there are stories to tell. I still read ‘The Herald’ every morning from New Caledonia. And I said to Philippa Howden-Chapman, they've
transitioned out of social housing into the backs of Toyota HiAce vans in South Auckland. I mean it's not anything to celebrate, but it tells a story of the widening problems that exist in Aotearoa. And not only that, this situation for three out of five has persisted over a period of several years.

It's important to note that New Zealand is not alone in this. The OECD report this year shows that that widening inequality is in fact a global phenomenon and in fact we're back now to what it was in the 1820's. And they show that inequality in OECD countries rose dramatically when globalisation became the big push in the 1980's. There's a certain inevitability I think in inequalities, in free market oriented economics like in New Zealand that seems to come with the territory so to speak.

And I notice that there's been considerable commentary on inequalities in New Zealand in recent times. The Inside Child Poverty documentary, the Salvation Army reports, there's been quite a lot of discussion in New Zealand. And it's also interesting that the Pacific voters were targeted big time in the lead up to the last election because there's a change in phenomenon in the Pacific communities. We will see what happens now that the election has settled down. Because there is a story to be told about the fact that the health status, the socioeconomic situation of Pacific people in New Zealand has deteriorated. Despite my wanting to put a positive spin on this, there's no other way to tell it but to say that we've got to do better.

During the decade 2003-2012, unemployment in New Zealand got worse for everybody but particularly for Māori and Pacific New Zealanders. There have been some encouraging signs of late. I want to point out that unemployment in young people, in young Pacific New Zealanders is a crisis. And something needs to be done because it's not hard to predict what's likely to come of this. And, you know, I put a question mark beside social cohesion because I wonder what's happening in Aotearoa. When I started to do this talk I actually put “New Zealand: A Divided Country” because there's no doubt that some groups are doing really well and some are doing rather poorly. So where's the social cohesion? Where are we at?

Sir Mason Durie talked earlier about the environments. The prevailing food environment in New Zealand is actually not great. And similarly with regard to alcohol misuse, its challenging. And again, Philippa Howden-Chapman talked about crowding; things have not changed for Pacific New Zealanders. In 2001, a quarter of the houses were too small, in 2013 a quarter of the houses were still too small. And of course what do you expect with regard to rheumatic fever and childhood infections?

I was asked to talk about Pacific models of health. Sione Tu’itahi and Karl Pulotu-Endemann have written them, a whole lot of people have written on different models. Most, interestingly, they often link them very closely to the environment, as Sir Mason Durie has pointed out. That it’s not just about individual health, but it’s about whānau and the broader environment. No great surprise of course. The thing that I think has potential is the significant Christian influences on many communities, their close affiliation. I should point out though that if you look at the census over the years, church affiliation in the young Pacific folk continues to decline. So whilst there's opportunities here in terms of Pacific communities, church is clearly an option but it's not a sustained one. Of course I reiterate there are multiple Pacific cultures that exist in Aotearoa. And I rather suspect that what's happening here is a complex blend of traditional and Western cultures emerging.

I don't know if you know this but half of all the Pacific new-borns in Auckland have more than one ethnic origin and of course what is bound to happen is a mix of these things. So what is the prevailing view? It's hard to say. Within the health system one thing that has emerged is Pacific owned, Pacific governed health services where potential is unrealised. These are community owned, community driven health services mainly in Auckland. I think there's a real need for a comprehensive evaluation of the whole movement because I do think there's plenty of potential there.
And the challenges ahead - one is clearly sustainable financing of health care in New Zealand, largely a reflection of population growth and aging. The big one from my point of view is that you’ve got to get serious about inequalities. And just a reminder, inequalities are unjust and avoidable differences in health status. I think there is a real challenge for New Zealand about dealing with and attending to persisting and widening inequalities despite various policies over the years. I think the minimum wage movement has a place here, somehow there needs to be some interventions on the underlying widening of salaries and wages. I think at least a minimum wage discussion sets a floor on these things and I notice that people are still ambivalent about it. How is it that it’s acceptable for a small proportion of society to be paid obscene amounts of money at one end and we have no policy on a minimum level? I think we need to increase investment in education, Pacific education specifically. I think Sir Mason Durie talked a lot about the sense of community. I do think this is a real opportunity and a strength of Pacific communities, to harness the energies, the talents and the networks that exist. Despite what I said about declining church affiliation by young Pacific folk, I think church based, faith based entities provide an opportunity.

What might I suggest by way of solutions? Can I be outrageous and suggest that the Prime Minister might set up a 2014 equivalent of the Royal Commission? Let’s do something serious about inequalities in Aotearoa. Set up an entity in the Department of Prime Minister and Cabinet, get all the parties together, look at what communities might contribute, look at what government can and can’t do. I suggest that the private sector might be interested. I think somehow we’ve got to rewrite this script because what we’ve been doing for the last twenty years, as you saw the evidence, hasn’t worked.

At the micro-level, I think smoking must continue to be an attention for Pacific communities, I think diabetes, obesity, particularly in young people, and child health also deserves attention. We can get distracted about a whole bunch of stuff but I suspect that if we made big impact on tobacco, we’d be getting ahead.

We need a new script. We can’t keep doing the same thing and expect different results. I wonder whether there’s an appetite for a negotiated agreement between Pacific communities and the government about what we might achieve over the next five years, over the next ten years, put some stakes in the ground and let’s agree on it. This is what the government can do, this is what communities can do, this is what churches can do, this what academics can do, so we can all see a way forward for ourselves. I think we’ve been meandering along, doing a whole bunch of stuff, getting really busy, hōhā (bored) and tired, but not achieving a hell of a lot and I do think there’s real potential in further support for Pacific owned health services.

Ladies and gentlemen, thank you very much.

**Reference**

Colin Tukuitonga

Director-General
Secretariat of the South Pacific Nourmea
New Caledonia

Email: colint@spc.int

Dr Colin Tukuitonga is Niuean, and the current Director-General of the Secretariat of the Pacific Community (SPC) based in New Caledonia. Colin has provided Pacific and Public health leadership in New Zealand, the Pacific region and internationally.

A New Zealand Harkness Fellow in Health Care Policy and Practice in 2000, Colin has held senior leadership positions including; Director of Public Health, New Zealand Ministry of Health (2001-02), Coordinator Surveillance and Prevention of Chronic Diseases, World Health Organization (WHO) Geneva, (2003-06), Associate Professor in Public Health and Head of Pacific and International Health, University of Auckland, New Zealand (2006-07), Chief Executive Officer, New Zealand Ministry of Pacific Island Affairs (2007-12), and Director of Public Health, SPC (2012-13).
Abstracts
What are we talking about when we ask about cultural needs in palliative care?

Lesley Batten¹, Maureen Holdaway¹, Marian Bland², Jean Clark²,³, Simon Allan², Bridget Marshall³, Delwyn Te Oka⁴, Clare Randall²

(L.Batten@massey.ac.nz)

¹Research Centre for Māori Health and Development, Massey University, Palmerston North
²Arohanui Hospice, Palmerston North
³MidCentral District Health Board, Palmerston North
⁴Te Wakahuia Manawatu Trust, Palmerston North

Issue

The New Zealand Palliative Care Strategy 2001 sought to address inequities in access to palliative care services experienced by Māori, by reducing cultural barriers and ensuring services were culturally appropriate. In 2005 when the Liverpool Care Pathway for the Dying Patient (LCP) was introduced into New Zealand, ‘cultural goals of care’ were included in recognition of the importance of cultural care.

Aims

Our research aims were to investigate how the LCP ‘cultural goals’ guided the delivery of culturally appropriate end-of-life care (EOL) for Māori within the MidCentral District Health Board (DHB) region; explore the experiences of EOL care of whānau (families) whose relatives have received care guided by the LCP; and with Māori communities, stakeholders, and providers, develop and pilot a culturally appropriate New Zealand version of the LCP.

Methods

We undertook retrospective chart audits of LCPs from three settings (home, hospice, and hospital) investigating the documentation of ethnicity and cultural care. Forty stakeholders who used the LCP were interviewed or participated in a hui (gathering). Seventy Māori health service providers, community members, or whānau members of a person who had received palliative care participated in hui exploring what culturally appropriate EOL care would look like in any setting. Pilot projects were then developed, including a toolkit of interventions for residential aged care, education packages for nurses, and revised ethnicity codes and ‘personalised care’ components in the LCP to replace the original cultural goals.

Results

Findings demonstrate the complexity around talking about culture, documenting cultural care, and clients’ experiences of that care. Two audits (100 and 258 LCPs) demonstrated poor ethnicity documentation, with no ethnicity recorded in 39% and 43% of LCPs. Stakeholders placed much emphasis on the need for culture to be overt in care documentation, however, while identifying the cultural goals as ‘more difficult’ to assess than other care goals (for example those of symptom management), cultural goals were documented as ‘achieved’ for both patients and relatives 99% of the time in 1360 entries, a much higher rate than for other care goals. Participants in the hui wanted palliative care to be integrated and coordinated, based on respectful and empathetic communication, with whānau involvement in decision-making and care, enabling tikanga (Māori protocols) to form the basis of holistic care.

Conclusions

Finding the shared language to talk about, document, and integrate health care that relates to personal and family beliefs, values and traditions, including culture, is a key component in progress towards developing culturally appropriate services.

Implications

Culturally appropriate palliative care must be based on an understanding of the complexities inherent in the word culture and the ways in which different stakeholders understand and apply the concept within care provision, and for whānau, experience that care.
Tobacco use in New Zealand - how are we progressing towards Smokefree 2025?

Sainimere Boladuadua1, Marie Ditchburn1, Deepa Weerasekera1, Sharon Cox1
(Sainimere_Boladuadua@moh.govt.nz)
1Health and Disability Intelligence Group, Ministry of Health, Wellington, New Zealand.

Issue
The New Zealand Government has committed to an aspirational goal of reducing smoking prevalence and tobacco availability to less than 5%, essentially making New Zealand a smokefree nation by 2025. The Government must also have regard to its obligations as a party to the World Health Organization’s Framework Convention on Tobacco Control (FCTC).

Aims
The findings of the 2012/13 New Zealand Health Survey (the survey) show a significant decrease in smoking prevalence in New Zealand since 1996/97. Results from the survey will be used to explore what is driving the decline in smoking prevalence.

Methods
The survey, conducted during July 2012 to June 2013, comprised a population of 13,000 adults and 4000 parents/caregivers representing 4000 children. The tobacco use questions explored current smoking, tobacco consumption, access to tobacco, quitting behaviour, support from health services and professionals, and exposure to second-hand smoke. Full details of the survey methodology can be found at www.health.govt.nz/ publication/new-zealand-health-methodology-report-2012/13.

Results
The significant decrease in smoking prevalence in New Zealand seen since 1996/97 has continued. In 1996/97, a quarter (25%) of the adult population reported being current smokers and by 2012/13 this rate had dropped to 18%.

Between 2006 and 2012, the largest relative decline in current smoking prevalence occurred amongst 15—19 year olds, from 20% to 13%. This decline has occurred at the same time as an increase in the average age of first use. The average age that current smokers over the age of 20 years tried or smoked their first cigarette (smoking initiation) was 14.8 years, with Māori youth being the earliest to start, at 14.1 years and Asian smokers the oldest, at 18.4 years. The mean age of smoking uptake (smoking daily) was around 3 years after smoking initiation, regardless of ethnicity.

The decline in smoking prevalence is occurring, at different rates among different population groups. Among ethnic groups, European/Others showed the only significant decline between 2006/07 and 2012/13, from 19% to 15%. Smoking prevalence among Māori remains high and unchanged at 39%. Pacific and Asian smoking prevalence has also not changed at 25% and 10% respectively.

Most smokers surveyed had tried to quit smoking in the past 12 months with almost two-thirds (64%) quitting smoking for at least 24 hours and almost six out of ten (58%) quitting smoking for at least a week. When asked to state the most common reason for making a quit attempt, over two-thirds (70%) of recent quit attempters responded ‘for their own health’, with the cost of smoking (‘too expensive’) being the second most common reason (39%).
Most smokers make numerous quit attempts before they finally succeed. While many smokers manage to quit by ‘going cold turkey’ (unaided cessation) likelihood that any given attempt will succeed is more than doubled if it is backed by professional smoking cessation therapy and support. The survey showed that almost half of recent quit attempters used some type of quitting product or advice to assist them in their most recent quit attempt. Medicinal therapy was the most common quitting product or service used by recent quit attempters, with nicotine replacement therapy being the most used (25%). The next most commonly used was some other medicinal therapy, such as Champix or Zyban (18%). Of the non-medicinal aids, 15% received help from their general practitioner and almost 12% from a service such as Quitline or Aukati KaiPaipa1.

Overall, there has been an increase in the total number of people successfully quitting smoking long term, from 8% in 2006 to 11% in 2012/13. The net long term cessation rate is lower, however, due to late relapers.

**Conclusions**

Since 1996, smoking prevalence has declined steadily, and that decline continued between 2006 and 2012. The survey results demonstrate how a decrease in smoking initiation and an increase in successful quitting rates contribute to the overall decline in smoking prevalence. This has been achieved through implementation of a range of interventions including legislation (e.g. the Smoke-free Environments Act 1990, and progressive increases in tobacco taxation), improved smoking cessation services, mass media campaigns, tobacco display bans in sales outlets and reduction in duty-free tobacco allowance. Although smoking prevalence is declining, this decline is not occurring at a fast enough rate to reach the aspirational goal of being a smokefree nation by the year 2025.

**Implications**

New Zealand has made significant progress in the past thirty years to reduce smoking prevalence and tobacco availability. In order to achieve New Zealand’s smokefree status by 2025, further action will be required. Continuing to focus on key groups such as; Māori and Pacific people, who have high smoking rates, is essential to reducing disparities in tobacco-related health outcomes.

The strongest evidence-based policy levers for triggering additional quit attempts are sustained tobacco tax increases supported by effective health promotion campaigns.

Key implications for policy, which the Ministry of Health is committed to, include: sustained incremental tobacco tax increases, more targeted smoking cessation programmes, continued clinical focus through the use of the ‘Better help for smokers to quit’ health target, legislative change (such as ‘plain packaging’) and improved compliance and enforcement under the Smoke-free Environments Act 1990.
“Innovative ways for promoting child and family nutrition”: How a private New Zealand social entity called Munch Cooking has promoted child and family nutrition using new technologies, awards and private/public partnerships.

Anna Bordignon¹
(info@munchcooking.co.nz)
¹Founder, Munch Cooking, Wellington, New Zealand

Issue
Promoting child nutrition using traditional communication methods can be difficult. Health promotion needs to look at whether new technologies and private/public partnerships can be used to better connect with people, create engagement and change behaviours.

Aims
We aimed to improve child nutrition by creating engagement around child nutrition with parents, grandparents and caregivers (the target population), those working within the food industry and key funders through a variety of new technologies and linkages.

Methods/action
We used a variety of social media strategies to create engagement. We initiated a blog written by mothers that grew into an online Food Magazine. To expand the topics covered in the magazine professional nutritionists also now contribute content.

Other social media platforms such as Twitter, Google+, Instagram, Pinterest and the most popular one being Facebook were used to engage with the target population. We used novel media strategies such as competitions, live question and answers sessions and sharing of posts with related organisations. We also offered social media services to other health related organisations which enabled us to stay a breast with the issues and share content.

We established the Munch Awards to raise awareness of the ‘good’ and the ‘bad’ of the children’s food industry. A separate website was built whereby parents were asked to nominate and then vote in categories such as worst and best kids’ food, worst and best kids’ food marketing campaign, best kids’ food blog and best kids’ kitchen product. Sponsorship was sought through both public and private entities for this annual food campaign.

We monitored hit rates, like and follow rates, share rates, number of comments and search rankings over all our social media platforms. The rates were then compared to comparative organisations. To enhance the physical relationship with the brand and to work with the community, product display boxes were offered to schools. The Munch Boxes contain display items from litterless lunch wraps, our internationally award winning Munch cookbook and health promotional material. Parents can purchase the products and a portion of the sales is given to the school.

Results/achievements
Munch Cooking is the top NZ New Zealand food online magazine for children's food based on hit rates and comparison with other blog/websites. It has been successful in generating a large following and high engagement on all social media platforms shown through likes /comments /shares and hit rates. Munch Cooking now has its own ‘community’ who are engaged on their platforms. The 2013 Munch Awards had over 2000 participants in the first year. Media coverage included articles in both the Dominion Post and the New Zealand Herald.
Conclusions
The use of new technologies to connect and create engagement on nutrition for children and families has been a great success for a private socially driven company called Munch Cooking. Drawing linkages between private and public organisations has assisted with the conversion of expert knowledge into the target groups language and wider exposure for the issues at hand.

Implications
New technologies can be very effective in connecting and forming engagement with target markets/ key population groups. Linkages between private and public entities provide good opportunities for greater buy-in and financial support. Employing those within the target market to promote the initiative ensures the approaches used speak to others.

For more information
http://www.munchcooking.com
The difference a living wage makes

Eileen Brown¹, Annabel Newman², Sophia Blair³
(eileenb@nzctu.org.nz)
¹ New Zealand Council of Trade Unions, Wellington, New Zealand,
² Service and Food Workers Union ³ Living Wage Movement

Introduction
The term “living wage” is now part of the New Zealand vocabulary. The Living Wage campaign was launched in 2012 supported by 50 organisations. In 2013 the organisation, Living Wage Aotearoa New Zealand, was established and there are over 46 member organisations from three streams: faith-based religious groups, community/secular groups and unions. There are Living Wage networks in Auckland, Hamilton, Wellington and Christchurch and interest simmering in other cities and towns. The New Zealand Living Wage Employer accreditation system and trade mark was launched in February 2014 and the first Living Wage Employers were announced in July of this year. There are now 27 accredited Living Wage Employers from a range of sectors including hospitality, security, social services, Non-Governmental Organisations (NGO) and food processing.

Living Wage campaigners call for wages to be at a level which provides for a worker and their family to have sufficient income to live on and for the wage to be adequate to enable meaningful participation of the worker and their family in their community. The Living Wage is underpinned by three central tenets: that paying workers higher wages has direct positive benefits for workers and their families; that paying a living wage has productivity impacts for employers; and, that paying low-income working people higher wages benefits society at large by reducing the social costs caused by poverty and low wages.

Low wage and in-work poverty
New Zealand workers have low wages by the standard of developed countries and there are a growing number of people in New Zealand who are both in work and in poverty - the working poor. The working poor demonstrate the inadequacy of New Zealand wages and salaries for the hundreds of thousands who are dependent on them. According to Easton (2013), “The majority of the poor are parents with jobs and their children (although they may have had only one or two), living in their own home albeit usually with a mortgage”. That two out of every five children in poverty are in households where at least one adult is in full-time employment or is self- employed shows the extent of in-work poverty (Perry, 2014).

Treasury has undertaken an analysis of the Living Wage and though it argued that the Living Wage is not well enough targeted to reduce poverty, its report confirms the worrying extent of low wages in New Zealand (Galt & Palmer, 2013). The report estimated that 45% of wage earners earned less than $18.40, of whom 56% earned between the then minimum wage of $13.75 and $15.00. This included 60% of Māori and Pacific workers. Women are rather more likely to be in the lower $13.75 and $15 band and less likely to earn above $18.40. In 25% of households with two adults and dependents, the principal earner of the household is on a wage rate below $18.40 (Perry, 2014).

Low wages mean that many thousands of wage and salary earners live on incomes that are unsustainable and inadequate. These people cannot save adequately for a house or retirement, have holidays away from home and they, and their families, cannot participate fully in their communities and in society more generally.

Critics of the Living Wage argue that paying living wages is unaffordable and are critical of the way in which the Living Wage rate is set. But there has to be an alternative to having hundreds of thousands of workers being on minimum wages or barely above minimum wage levels and living on or close to poverty levels. The Living Wage provides such an alternative.
In response to critics who oppose the introduction of living wages on the basis of unaffordability, the international research has been that the cost of implementation of living wages has almost always been lower than the initial estimates. A review of the research in 2006 indicated that the majority of studies on the living wage found that (1) there had been a low or moderate effect on municipal budgets; (2) that workers and their families benefited with few, if any, negative effects and (3) that employers benefited from decreased turnover and increased productivity (Thompson & Chapman, 2006).

Most studies on the Living Wage have reinforced both the relationship between increased wages and reduced turnover and that higher wages can lead to increases in productivity. The San Francisco Airport study found that labour turnover among security staff fell from 95% a year to 19% a year once the Living Wage was paid (Reich, Hall, & Jacobs, 2005). A study of cleaners at Queen Mary University of London revealed that the moves to be a Living Wage Employer and bring the cleaning service in-house stimulated improvements in job quality, productivity and service delivery with little increase in cost (Wills, Kakpo, & Begum, 2009). Another study showed significantly lower rates of turnover leading to substantial cost savings on recruitment and induction training, lower rates of absenteeism and sick leave, enhanced quality of work and widespread efficient work reorganisation (London Economics, 2009).

A study to explore the costs and benefits of the London Living Wage concluded that paying the London Living Wage secured great potential benefits to the Treasury and indirectly to the tax paying public and service users; that it also found clients and employers were managing the costs of the service while also benefiting from the reduced rates of labour turnover; and, that Living Wage workers had higher levels of psychological wellbeing than their non-Living Wage counterparts (Wills & Linneker, 2012).

This research builds on the study presented at the 2013 Public Health Association Conference that examined the emergence of the Living Wage movement's collaborative model between faith-based groups, community organisation and unions: the motivations, considerations for engaging in such a movement, and expectations of key individuals in those organisations (Brown, Newman, & Blair, 2013).

It is too early to assess the full impacts of the implementation of the Living Wage in New Zealand but we expect to see the same results as have occurred overseas: productivity improvements; effective cost management; benefits to government, employers, and clients of Living Wage businesses and, improvements to the psychological wellbeing of employees.

This qualitative research looks at the very early impacts from introducing the 2014 Living Wage for employers and employees in accredited Living Wage businesses. It explores why businesses have chosen to become Living Wage Employers and the impacts on employees from being paid a Living Wage. It aims to establish whether a Living Wage truly makes a difference to the first businesses that have taken the courageous step to implement it.

A range of one-on-one interviews were conducted with accredited Living Wage Employers and employees to assess the initial impact of the Living Wage. A total of four employers and five employees were interviewed. These participants came from different areas of New Zealand - Auckland, Palmerston North, Wellington and Christchurch. Effort was made to ensure that employers from different backgrounds (businesses, NGOs and unions) were represented. Due to the small number of interview, participants are credited as generic sources in this paper in order to protect anonymity. In the analysis of data employers are identified with an E and workers with a W.

Previous research done in the United Kingdom informed the type of questions and themes explored with each interview participant. For employers, it was important to understand the motivations behind becoming
Living Wage accredited, the positive impact on the organisation as well the challenges that arose as a result of accreditation. Interviews explored subjects such as productivity, staff training, absenteeism and workplace culture and the impact of the Living Wage in these areas. For employees, it was crucial to understand their perspective concerning the impact of the Living Wage on their workplace and in their home and leisure time. Interviews explored subjects such as health outcomes, work/life balance, cost of living and community engagement and the impact of the Living Wage in these areas. In particular, it was important to understand the impact that the Living Wage had on their role in their workplace and their relationships with their managers and other work colleagues.

Thematic analysis was the analytical method used to then identify, analyse and understand themes that emerged from the interviews. Thematic analysis was used as it provides a flexible method of data analysis and works well when there are multiple researchers involved. It ensures that the interpretation of themes is supported by data and in particular, it a useful method for responding to research questions that go beyond each interview participant’s experience. In this study, thematic analysis was used to analyse the experiences and the reality of employers and employees involved in Living Wage accredited businesses and organisations.

There are some limitations to a study with a small number of interview participants. A greater number of interviews with employees and employers would be needed in order to explore the themes identified in greater detail, particularly nuances within each theme. Greater granularity would then enhance the strength of this paper’s conclusions. Irrespective of this, the research did not set out to assess the full impact of the Living Wage. Instead it focused on developing some initial themes that have emerged in the early stages Living Wage accreditation process. These themes will then serve as the basis for further research in this area.

**The Interviews**
Ethics, productivity and participation emerge as important themes for businesses and their workers after the adoption of the 2014 Living Wage.

**An ethical decision**
The ethical commitment to the Living Wage was an expression of the employers’ own values as well as an investment in people that would support success and sustainability of the business. The Living Wage was described as a “moral imperative” and “just the right choice to make.” A Living Wage was also seen as an investment in society as a whole. Whether this was as an environmental NGO or a service provider, they saw an alignment of its organisational values with the values of the Living Wage Movement.

Businesses don’t work in isolation and the ethical approach wove together the worker’s labour, the product created and the society in which they seek to thrive.

> We’re offering a really nice product and if my own employees can’t afford to eat it then that’s not good; it’s better for us as a business if they can afford to eat there.

The ethical approach was an expression of the business taking seriously the role of the employer, as they describe it:

> It’s about principles; it’s about the equality and being fair and social justice; it’s about being serious as an employer.

> This isn’t just some sort of “I’ll-show-up-and-do-whatever” job, it’s actually a job; there’s no component of the whole [business] that isn’t important.

This was, in the words of one owner, a question of “basic leadership to do your best for your staff.”

> ...If you’re in a position where you can hire people you are obviously in a relatively privileged position
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compared to the people who are working for you, by definition...you’ve got to try and share the success of the business with your staff, regardless of whether there is a direct benefit that feeds back to yourself.

**Productivity**

A number of factors contribute to what is described here as productivity. In a couple of instances there was further investment in staff as the business focused on best use of a “scarce resource” but also two employers noted that behaviours changed between staff in the workplace as they valued the jobs more and had higher expectations of each other around performance.

At the end of the day you’re employing people to do a job but I think the living wage is an investment in the welfare of people. It’s an understanding if you increase the quality of someone’s life, which the living wage does; it increases productivity, goodwill and people’s respect for their company.

The change in pay was often accompanied by other enhancements to their business in respect of workplace practices, human resources and product, such as a staff coach and “more systemised ways” of making sure the business was supporting staff. As one owner said:

> It forces me to view my staff as a scarcer resource than they were before and a more valuable resource, put more time into training them, give them more responsibility and push them harder to produce more because if you don’t do that you’re just throwing money away. You don’t actually need to produce that much more to do that.

Small businesses have often been held out as the least likely to be able to pay a Living Wage and yet the Living Wage has been taken up by many small businesses in the private sector and who, according to early reports, have made it work. One owner, on board for just three months at the time of writing, said he aimed high with projected costs but “it hasn’t cost that much, so wage efficiency has actually already come about.”

In a public debate about the Living Wage at the Warehouse, the big New Zealand retailer maintained workers would receive the equivalent of a Living Wage through a career rate to be paid after 5000 hours or three years’ service. However, paying a decent wage can have benefits for the business by creating loyalty and commitment to the business rather than expecting this to emerge over time so that “the deserving” can then be rewarded with a Living Wage.

> I know they don’t have to pay me what they pay me so I feel obligated to give a little bit more; you know, like if they expect me to go over and beyond, I will because they have gone over and beyond for me...it’s reciprocal.

**To survive and participate**

The workers surveyed talked about the Living Wage enabling them to have a little extra to save for emergencies, a meal out now and then, the petrol to drive the kids out of town for an event, and a significantly less stressful life. There was also an impact on their mental and social wellbeing, on their ability to participate in their family, in their cultural traditions and in their community as a whole. The Living Wage made giving, reciprocity and hospitality a possibility.

Living in a house that operated like a community marae, used for choir practice, a worker described how he was now able to provide food for visitors and not worry about the use of power during gatherings.

The consequence of having insufficient money to participate in cultural traditions was referred to by three of the worker respondents. One worker said that if there is not enough money the family would choose to isolate themselves because they know “it will be rude to turn up and not contribute.” The difference the Living Wage makes was captured by this worker:
...in this day and age you need money to live and survive comfortably... “living” is exactly the right word, not just existing; on a Minimum Wage you are just existing...

**Conclusion**

This early study of the impact of the Living Wage on businesses and their workers presents a heartening tale of the positive impact on effected workers and their families because being paid adequately has enabled these employees to pay for the basic costs of living; it has reduced stress and it has enhanced their ability to participate in cultural activities and, therefore, communities. The businesses adopting the Living Wage have described productivity benefits following accreditation as they have refocused their attention on ensuring their scarce and valued human resources are utilised as efficiently as possible. They report that costs have been contained to date and, in one instance, even the price of the licence fee had been recovered.

The difference a Living Wage makes is both perception and reality. It is real for the workers who can describe the material and psychological benefits of a decent wage; it is real for the businesses that described changes to work practice and behaviours. The difference is also perception for this small but important group of businesses which undertook to become accredited, because they believe they can make a tangible difference not just to individuals and their workplace but to the economy of New Zealand as a whole. As one employer put it:

...Henry Ford did it; he made it so his employees could afford the car. You want to talk about actual growth and progress; you can’t have one without the other... I just don’t think you can have growth without growing people’s wealth, growing people’s earning potential - and that money will get ploughed back into the economy.

**Reference**


He āwhina i ngā wawata o ngā whānau – Helping whānau achieve long term change

Johnny Seve¹, Puawai Shortland, Shirleyanne Brown
(ngatihauhealth@gmail.com)
¹Ngāti Hau Health and Social Services Incorporated Society.

Ngāti Hau Health and Social Services (NHHSS) was established in 2011 to provide a Whānau Ora service for whānau affected by violence. Ngāti Hau is made up of six marae (Courtyard in front of the wharehui (traditional meeting house)): Maraenui, Omania, Akerama, Whakapara, Pehiaweri and Te Maruata which spans from the Mid North to Whangarei.

Over the last three years we have developed and implemented a whānau-first service, owned by hapū and led by whānau. It is humbling to hear the stories of positive change in whānau which can be attributed to providing a simple yet effective approach, based on whanaungatanga (relationship building) and manaakitanga (hospitality) served with a hot cuppa tea, a cake or smoked mullet. NHHSS operates through the invitation of the whānau, this means we are mobile and time flexible in our places of mahi i.e. marae, public places, offices, home, park. It is important we provide a neutral, non-judgemental environment where people accessing our service feel comfortable and safe.

The approach of our service is one of whakawhanautanga rather than a problem to be solved. We start with making connections with a listening ear and then connecting whānau with complex needs to the appropriate services. We have created opportunities for whānau to realise their potential by providing a suite of options. These include Te Pōkaitahi Ngāpuhi Nui Tonu (a Ngāpuhi specific certificate in Te Reo), Te Matarau Education Trust – Māori and Pasifika Trade Training Initiative, prevention and social change projects provided by E Tū Whānau kaupapa.

NHHSS have adopted effective and useful methods to capture ‘what matters’ to whānau in achieving sustainable change. A personally designed Whānau Ora care plan, incorporating Te Whare Tapa Whā (Durie, 2004), and tikanga values and principles (manaaki, whanaungatanga, whakapapa (genealogy), aroha (love)) we then create a partnership approach where the whānau determine the pace and best fit for them. NHHSS records our services delivery and effectiveness through the guidance of Friedman’s (20015) Results Based Accountability Framework and other complementary methods. This provides the ability to record a true picture of positive change.

We maintain our level of quality delivery and outcomes by the following report methods: kanohi ki te kanohi (face to face), Survey Monkey, feedback forms, call in and call up, annual community and whānau report evenings, Facebook page, celebrating whānau success. Our commitment to whānau and the wider community is based on the principle that ‘no door is the wrong door’. We recognise the role of hapū in providing an alternative for whānau to access services that is based on best approach for whānau, not most convenient for services as well as encourage whānau to find solutions within themselves.

“Kua tawhiti kē tō haerenga mai, kia kore e haere tonu. He tino nui rawa ou mahi, kia kore e mahi tonu” We have come too far, not to go further. We have done too much, not to do more. -Sir James Henare.

References
E Tū Whānau – www.etuwhanau.org.nz
The New Zealand Guidelines for helping people to stop smoking: A new breed of guidelines for the busy health practitioner

Heather Button¹ and Leigh Sturgiss¹
(tobacco@moh.govt.nz)
¹ Ministry of Health, Wellington, New Zealand

Background
Treatment for tobacco dependence is an important part of any comprehensive tobacco control strategy and is recognised as such in Article 14 of the Framework Convention on Tobacco Control (FCTC) (World Health Organization, 2005). A key component of Article 14 is the development and dissemination of evidence based tobacco treatment guidelines.

New Zealand has a strong history of producing high quality tobacco treatment (smoking cessation) guidelines. These were first published in 1999 and revised in 2002 and 2007 and have helped to shape how health care workers deliver stop-smoking advice for over a decade. These guidelines followed the traditional structure where evidence is summarised, graded according to its strength and evidence statements produced. This structure typically results in a lengthy document making it difficult to find relevant information quickly and less likely to be read. Furthermore where the evidence is not clear recommendations can be vague leaving front line health care workers unsure of exactly what to do.

Given the importance of frontline health care workers in motivating and support people to stop smoking guidelines need to be simple and practical so that they are easily read and used (McRobbie, 2013).

Aims
In 2013 a decision was made to revise New Zealand's Smoking Cessation Guidelines to ensure they (a) are based on recent evidence and (b) are as succinct and user-friendly as possible.

Method
The Ministry of Health (MoH) used the 2007 guidelines as a starting point for the revision process. Data from a recent international review of evidence for tobacco dependence treatment (West et al., 2013) were used to update evidence summaries. This detailed information was written into a background document so that the guidelines could be kept concise and contain more practical information that was directly relevant to health care workers. The MoH also clarified the guidelines core audience, and sought feedback from key stakeholders on the information required to enable health care workers to systematically screen for tobacco use and make an offer of evidence-based stop-smoking support in keeping with the ‘ABC’ pathway for smoking cessation (McRobbie et al., 2008).

The 2007 Guidelines Working Group, as well as Tobacco Health Target Champions and a selection of health care professionals and international tobacco treatment experts were invited to review the revised guidelines. Feedback was collated and incorporated into a revised draft before undergoing editing and formatting.

Results
In May 2014, The New Zealand Guidelines for Helping People to Stop Smoking were published. These Guidelines are only six pages in length (compared to the sixty-six pages of the 2007 guidelines) and have been divided into three parts. The first is for managers of health care services and covers barriers and facilitators to effective implementation of the ABC pathway. The second is aimed at all health care workers and directs them to A) ask the people they see about their smoking status and B) give brief advice to stop to everyone who smokes. It is not expected that health care workers provide on-going cessation
support themselves. Instead, health care workers should C) strongly encourage everyone who smokes to use cessation support and offer help to access it. A simple algorithm is provided to help guide health care workers through each step. The final part is for stop smoking practitioners and provides more detailed information regarding behavioural support and pharmacotherapy.

In addition to the Guidelines, three supplementary documents were also developed for people who want further information: A) the Background and Recommendations of the New Zealand Guidelines for Helping People to Stop Smoking; B) the Guide to Prescribing Nicotine Replacement Therapy; and C) The ABC Pathway: Key messages for frontline health care workers. These are held online by the MoH and will be updated as new evidence and procedures arise. See http://www.health.govt.nz/publication/new-zealand-guidelines-helping-people-stop-smoking

Conclusions
The publication of The New Zealand Guidelines for Helping People to Stop Smoking represents an important shift in how guidance is presented to those working on the frontlines. In a sector where competing priorities are abundant, it is becoming increasingly important to identify each subject’s key messages, and to develop guidance/tools that support health care workers to deliver them.

References


Evaluation of the Canterbury under-eighteen seasonal influenza vaccination programme

Kristi Calder1, Susan Bidwell1, Cheryl Brunton1, Ramon Pink1
(Kristi.calder@cdhb.govt.nz)
1Canterbury District Health Board, Christchurch, New Zealand

Issue
Following the February 2011 Canterbury earthquakes the Canterbury District Health Board (CDHB) explored strategies to reduce admissions to its hospitals in Christchurch, which had been extensively damaged by the earthquakes and had significantly reduced capacity as a result. The expectation was that a targeted seasonal influenza vaccination campaign for under-eighteen year olds would reduce the number of people with seasonal influenza and this in turn would reduce the number of hospital admissions over winter in Christchurch.

Aim
To evaluate the performance of the 2013 Canterbury under-eighteen seasonal influenza vaccination programme.

Methods
Routinely collected under-eighteen influenza vaccination uptake data were analysed to determine levels of vaccination uptake and equity of uptake across ethnic groups (New Zealand European, Māori and Pacific) and by level of deprivation. Qualitative data were collected to identify strategies that helped to achieve high uptake in primary care practices and schools.

Results: Overall uptake of influenza vaccination in 2013 was 32.9%, (compared to 18.5% in 2012), close to the target of 40%. Overall uptake in primary care was higher than in the school-based programme (29.2% versus 19.7%). Māori students had a higher uptake than New Zealand European students in the school-based programme. In primary care, uptake for both Māori and Pacific children was lower than overall uptake and there was a marked gradient in uptake by socioeconomic quintile, with 30.2% uptake in the least deprived quintile compared to 21.9% uptake in the most deprived quintile.

Conclusion: The cumulative effect of three years consistency in offering the under-eighteen influenza vaccination in primary care practices, assisted by a timely media campaign and additional awareness generated by the school-based programme, has resulted in a marked increase in uptake of the vaccine in primary care in 2013. However, this was not equitably distributed. The school-based programme achieved better equity of uptake by deprivation and ethnicity. The challenge is to achieve both high and equitable uptake.

Implications: The findings of this evaluation have resulted in the CDHB making an earlier decision about the 2014 school-based programme and communicating their decision to schools during term four of 2013 to enable them to incorporate the vaccination programme in their planning for the following year. There will also be some additional resources made available in 2014 so that the vaccine can be delivered in a shorter, more concentrated programme before the onset of the influenza season.

For more information
One community’s action to fight alcohol harm

Karen Carpenter¹,
(nurses@eastcare.pegasus.net.nz)
¹Practice Nurse, Pacific Reference Group, Canterbury Clinical Network, Christchurch, New Zealand

Issue
In December 2013, a temporary alcohol off-licence was granted in the Christchurch suburb of Aranui. The granting of the license meant five licensed premises were within a one kilometre radius of one another. Aranui is a low income area with a high Māori and Pacific population, which has been hard hit by the 2011 earthquakes. There was widespread concern another liquor outlet would be detrimental to the health and wellbeing of the community.

Aims
The aim of the community action was to close the premises in order to reduce alcohol harm to vulnerable populations and to promote a safer and healthier community.

Methods
Community action was mobilised through a variety of means including a community circulated petition and an online petition promoted through Facebook. Local Members of Parliament and City Councillors were contacted regarding the community’s concerns. The Christchurch City Council (CCC) was invited to a community meeting to discuss the issue of the licence and provide insight to legislation. Local newspapers were contacted to raise awareness of the issue which resulted in coverage of the story.

Results/achievements
The petition achieved over 900 signatures with 100+ online comments from current and past community members stating their opposition. One objector quoted:

Aranui belongs to our families, our young people, our children, and our elderly who all need to be protected from the harmful effects that the presence of excess alcohol outlets brings. If we do not stand up for the health of our community, the presence of liquor stores will mutate our community into that which we are trying to protect it from. We need to promote health not habits.

A meeting with CCC Liquor Licencing Team resulted in the discovery that 90 day temporary liquor licenses could be granted to liquor store owners post-earthquake for any vacant store in any area within Christchurch without public consultation.

A subsequent public meeting was held to allow submissions on the granting of a permanent Liquor License. A groundswell of verbal and written submissions were made objecting to the granting of a permanent license by church leaders, alcohol and drug services, school principals, the Pacific Reference Group, the Medical Officer of Health, Christchurch Police and community organisations. Objections were collated and submitted to the CCC Liquor Licensing Team. Since this meeting, an application for a permanent Liquor License has been made, but it is understood the applicant is looking at other options. The store has remained closed since March 2014.

Conclusions
The New Zealand Law Commission (2010) review “Alcohol in our lives: curbing the harm” highlights alcohol as harm to population health and the increased risk to specific ethnicities those being Māori, Pacifica and low socioeconomic groups. This paper re-enforces the issues faced in Aranui and the detriment to the community as a whole, therefore justifying our cause.
Implications
There are currently limited opportunities for communities to influence the density of liquor outlets in their communities. Despite this, mobilised community action can have a positive impact and influence decisions such as this. Furthermore, the promotion of autonomy and governance is of great importance as it can empower communities.

Reference
The Guidance: For healthy weight gain in pregnancy

Harriette Carr

(Harriette_Carr@moh.govt.nz)

1Ministry of Health, Wellington, New Zealand.

**Issue**
Optimal weight gain during pregnancy is associated with improved outcomes for both the mother and the baby regardless of the mother’s existing weight. An estimated one third of women of normal weight, and 60% of obese women gain more than recommended during pregnancy.

**Aims**
The Guidance aims to update and replace earlier weight gain and nutrition advice for pregnant and breastfeeding women and to align with the Institute of Medicine's updated guidelines. It aims to ensure the delivery of consistent advice to women through Ministry funded maternal and child health nutrition and physical activity contracts, and Healthy Families New Zealand. Healthy Families New Zealand is a new initiative, in ten locations that aims to improve people's health where they live, learn, work and play in order to prevent chronic disease. This work will support Lead Maternity Carers in the area of weight management advice during pregnancy and therefore improved health and wellbeing of mothers and babies.

**Method**
The Guidance was developed following a review of international policy, a workshop of relevant health practitioners and on-going review and input from an expert working group. This group consisted of representatives of The Royal New Zealand College of General Practitioners, New Zealand College of Midwives, the Royal Australian and New Zealand College of Obstetrics and Gynaecology, Dietitians New Zealand, and Gravida (Healthy Start Workforce Project). Based on an internal review of international guidelines, the Ministry recommended adoption of the Institute of Medicine's 2009 advice for total and rate of weight gain during pregnancy.

**Results**
Published in June 2014, the Guidance includes key practice points for pre-pregnancy, during pregnancy and postpartum which link to existing adult weight management guidelines. They promote monitoring of weight during pregnancy, offer nutrition and physical activity tips, and advice regarding returning to a healthy weight. The Guidance and supporting resources can be found on the Ministry of Health website: (http://www.health.govt.nz/publication/guidance-healthy-weight-gain-pregnancy).
Advances in health service information technology systems - opportunities to better understand populations

Lynley Cook¹
(lynley.cook@pegasus.org.nz)
¹Pegasus Health (Charitable) Ltd, Christchurch, New Zealand

Issue
The sophistication of health services information systems has seen major progress in New Zealand over the past fifteen years. For instance the establishment of Primary Health Organisations (PHOs) in conjunction with population based enrolment registers has meant that a set of metrics is collected about all people enrolled - the great majority of the population. This has enabled better understanding across populations. More recent Information Technology (IT) innovations have the potential to increase the usefulness of health service data. This paper’s objective was to identify how recent health service IT innovations can enhance our understanding of population health.

Methods
The study was undertaken by a review of Canterbury Clinical Network IT programme documents and key informant interviews in Canterbury.

Results/achievements
Health service IT systems have the potential to impact on population health outcomes through a better understanding of populations; however this is contingent on the availability of a wide breadth of high quality health status and demographic data that is integrated across the health system. PHO enrolment registers have required standardised recording of a set of demographic information (age, address, gender and ethnicity). Data querying tools have been developed to enable PHOs and general practices to analyse population data at a local level. Though this has been useful, the data has been limited to that collected by general practices. Recent innovations such as electronic referral systems (ERMS) and shared care record systems (HealthOne) that are accessible to health professionals (and soon to be widened to patient portals) have had the effect of widening the breadth of data available and also have had an impact in the quality of the data. On a larger scale, innovative IT systems (such as Healthsafe) are being developed that will be able to link anonymised data from a much wider range of health services.

Conclusions
PHO population-based enrolment registers have formed a foundation that has increased our ability to understand populations. The potential of this register is being increased by the addition of IT systems that allow for the integration of other health system data sets, allowing for a wider breadth and higher quality of data.

Implications
Increasingly, health services data will be able to contribute to population level information that can inform not only health service provision, but wider health promotion, public health and population level responses to health need.
Kava-cation

Sanalio (Sana) Daunauda¹
(sanad@marlboroughpho.org.nz)
¹Kimi Hauora Wairua-Marlborough Primary Health Organisation, Blenheim, Marlborough

Kava-cation is a smoking cessation programme targeting ‘hard to reach’ population groups such as Pacific men, pregnant women, and youth at weekend kava sessions. It was carried out from November 2013 to October 2014 in Blenheim, Marlborough.

The 2011 Marlborough Pacific Health Needs Analysis (Cragg & Daunauda, 2011) identified that the Pacific community in Marlborough was hard to reach and fragmented. Furthermore cost, leadership, communication, and information regarding health services were also identified as major barriers to accessing services highlighting health disparities for Pacific people in Marlborough. In response to these findings and its recommendations, an overarching conceptual framework called “Talanoa Mo’ui” (talking health/wellbeing) was developed to inform programme engagement methodology and data collection.

Kava-cation was designed to test whether the talanoa mo’ui process would have an impact on the participants’ decision-making towards a smokefree lifestyle, to quit the habit and to champion the smoking cessation cause. The programme also wanted to understand and identify with the individuals what motivated them to quit, and to build on that motivation. Kava-cation uses the Talanoa Mo’ui principles of dialoguing, the Tongan royal kava ceremony (Taumafa Kava) protocols of seating arrangements (fakanofonofo), and presentation of gifts (ngāue) to dialogue about smoking cessation in an appropriate cultural environment.

Talanoa is a Pacific conceptual framework for engagement. In the first instance talanoa wants to satisfy a need to connect and to relate. Talanoa creates enquiries that lead to conversations about attitudes and habits. Talanoa can also be directive, deliberate and purposeful, and can facilitate an environment that creates opportunities conducive to change. The involvement of the two Tongan Kava Clubs was integral to the success of the Kava-cation programme as they provided cultural legitimacy and expert advice on kava ceremony protocols and context. This relationship will also provide a platform for future collaboration and partnership.

The Kava-cation programme explores the issues of smoking through a Talanoa series. These are not just about how to quit and the impact of smoking on personal health; they also holistically address health and safety at home by framing the questions and dialogue in an open-ended format. For example, the question is asked, “is your home a healthy home?” or, “is your home a safe home?” The answer could be “yes” or “no”. The dialogue continues with ‘what’, ‘where’, ‘why’, ‘how’ and ‘who’ questions, with the ultimate outcome at the end resting on choice and autonomy.

Kava-cation follows the standard outcome measures of smoking cessation services in New Zealand for measurement of smoking status at two time-points. The first is at 4 weeks following the target quit date (TQD) and the second at 3 months. The programme which ran for 12 months was funded by the Ministry of Health. The funding has recently been extended for another 2 years (until 2016). In the 12 months ending October 2014, the programme had 79 participants; 19 were women, 5 of whom were pregnant at registration. 45 participants booked a TQD and 19 out of the 45 abstained from smoking for more than three months.
The goals of the Kava-cation programme are consistent with the priorities of the 2025 New Zealand Smokefree aspiration goal. It also focuses and aligns its activities to achieve the bold goal of halving the rate of avoidable admissions for Māori, Pacific and children by 2021. The talanoa approach to smoking issues in the kava session setting allows these ‘hard to reach’ men to share and express their struggles, fears and triumphs, unintentionally ‘spilling the beans’ in a safe and culturally appropriate environment.

Acknowledgements
First and foremost, I would like to thank my Father in heaven for his guidance, provision and blessings each day during this journey. I also want to acknowledge my wife Dawn, for her help and support with reading and correcting my work. Special thanks to Mr. Lasike (Lasi) Kula, our Pacific Fānau Advocate, for his wisdom, insight, sensitivity, advice in season and out of season, and for making this programme a success. I also would like to thank the Marlborough Pacific Community for their generosity in welcoming us with open arms into their homes.

Reference
Vege-cation: A Pacific vegetable garden programme in your backyard with no smoking allowed

Sanalio (Sana) Daunauda¹
(sanad@marlboroughpho.org.nz)
¹Kimi Hauora Wairua-Marlborough Primary Health Organisation, Blenheim, Marlborough

Vege-cation is an innovative vegetable garden programme which allows the service providers to have regular engagement with the Pacific population in Marlborough by providing free vegetable seedlings in exchange for a foot at the door to “talanoa” (dialogue), and disseminate information concerning health and other services. The primary function of the programme is to get healthy, nutritious food into Pacific homes. The positive consequences are just as important; monitoring chronic conditions such as diabetes, and the no smoking message in that community.

[As in the previous synopsis] the Marlborough Pacific Health Needs Analysis (Cragg & Daunauda 2011) identified that the Pacific community in Marlborough was hard to reach and fragmented. In response to these findings and its recommendations an overarching conceptual framework was developed called “Talanoa Mo’ui” (talking health/wellbeing) to inform programme engagement methodology and data collection. Talanoa is a Pacific conceptual framework for engagement. In the first instance talanoa wants to satisfy a need to connect and to relate. Talanoa creates enquiries that lead to conversations about attitudes and habits.

For example, during the designing phase of the programme every home we visited had a big backyard with no vegetable garden. The interesting thing was that everyone wanted a garden but were not confident to ask the landlord or to manage time (little time after work to do gardening). Initially we considered developing a community garden but after two more “talanoa” with the community we established that the majority (98%) worked in the vineyards. On top of that many worked one to three shifts after working in the vineyards. It became clear that we had to design a programme that was closer to home, in line with the government goals of providing services closer to where people live. While community gardening is a successful programme in its own right, we found it problematic on four fronts: travel costs (petrol), transport, time, and those who access community gardens are those who can afford to do so.

Vege-cation is a programme designed to integrate a community that was fragmented and hard to reach. We provided free vegetable plants to the Pacific community and in return gained access to their homes (within reason) to talanoa about issues that might be of concern to them or to us as service providers, and in so doing built sustainable relationships. A fulltime Pacific Fānau Advocate was employed to provide leadership, to manage the programme and to be the key linkage between the Pacific community and the service providers. The programme is based in Blenheim, Marlborough within the Kimi Hauora Wairau Marlborough Primary Health Organisation (MPHO) boundaries, and includes the Havelock, Picton and Seddon communities.

The main criteria to be part of the programme was to have a genuine address and phone number (no registration, no vegetables). Households were given twenty vegetable varieties to choose from, and they either chose only those they knew and liked, or the whole twenty. The programme was funded by the MPHO and the Public Health Unit, Nelson-Marlborough DHB and proved to be a success. During the first season (2011 -2012) eighty-five families registered, increasing to one hundred and twenty-five in the second season (2012-2013), and further increasing to one hundred and eighty-five in the third season (2013-2014). During those years eleven people quit smoking, enrolment with GP services increased, engagement with service providers improved across the board, and there was a noticeable reduction in food bills on the table for Pacific people. There were 969 Pacific residents in Marlborough according to the 2013 census, and 185 families totalling 798 individuals were involved in the programme.
In conclusion, the talanoa conceptual framework principles of engagement that underpinned the success of the collaboration between the service providers and the Pacific community were: 1) foot at the door, 2) come and see, 3) go and tell what you see and hear, and 4) regular contact which helped to improve and create sustainable relationships. This continues to lead to stronger social relations and capital which will drive community change naturally in the future. Above all it was affordable. The implication is that good qualitative research based on local knowledge and experience proved to be invaluable when developing a low-cost programme such as vege- cation. This could be transferrable to fit other contexts and communities.

Acknowledgements
First and foremost, I would like to thank my Father in heaven for his guidance, provision and blessings each day during this journey. I also want to acknowledge my wife Dawn, for her help and support with reading and correcting my work. Special thanks to Mr. Lasike (Lasi) Kula, our Pacific Fānau Advocate, for his wisdom, insight, sensitivity, advice in season and out of season, and for making this programme a success. Special thanks also to the KHW-MPHO and the Public Health Unit, Nelson-Marlborough DHB for your financial supports to make it happens. I also would like to thank the Marlborough Pacific Community for their generosity in welcoming us with open arms into their homes.

Reference
Hoki ki te Rito – Oranga Whānau – supporting whānau relationships

Lyn Doherty¹, Tigilau Ness¹, Winiata Whare¹, Hone Fowler¹, Tawera Ormsby¹, Amanda Smith¹
(lyn.doherty@ohomairangi.co.nz)
¹Ohomairangi Trust, Auckland, New Zealand

Aim
Parenting programmes have been shown to improve children’s relationships with their parents/caregivers, and reduce problem behaviours, however little research has focused on outcomes for indigenous families. In response to requests from Māori mothers participating in Hoki ki the Rito/Mellow Parenting, to provide support for their partners in parenting, the Mellow Dads programme was adapted to support both indigenous fathers and mothers. This fourteen week parenting programme employs attachment theory and cognitive-behavioural methods to promote change and improve parent-child interaction. Video feedback and group dynamics are key techniques employed throughout the group-based intervention. The aim of this study was to evaluate the acceptability and effectiveness of Hoki ki te Rito/Mellow Parenting programme, for Māori and Pacific mothers and fathers in New Zealand.

Participants
5 groups comprising 32 fathers and 48 mothers, with children aged between 0-5 years, where there were relationship difficulties, adult addiction issues or child behaviour problems, were delivered in South Auckland, New Zealand.

Main outcome measures
Mothers and fathers self-reported competence, stress and wellbeing, and coded videos of parent child interactions on home videos. Children’s behaviour and development was assessed using parents' self-reports and observation of videos. Focus groups were held with participants towards the end of each programme.

Results
Parents attending Hoki ki te Rito parenting programme reported a significant increase in their own wellbeing, their ability to cope with their parenting role/children's behaviours, their feelings of self-esteem and adequacy, along with a reduction in unwanted problematic behaviours from their children, and an increase in children's social skills. The programme also led to greater movement from the clinical range to the non-clinical range for mean child behaviour scores on all measures. Effects were primarily maintained at a three month follow up. Qualitative data showed extremely positive responses to the programme resources, content and process.

Conclusions
This study provides empirical support for the effectiveness and acceptability of this culturally adapted version of Mellow Parenting – Hoki ki te Rito, delivered by Ohomairangi Trust, in this community settings. The outcome of this study may be seen as a significant step in increasing appropriate service provision for Māori and Pacific families and reducing barriers to accessing available services in the community.
Evaluation of the Christchurch Fruit and Vegetable Co-op

Hongfang Dong¹, Hannah Mulrine¹, Cheryl Brunton¹, Lucy D’Aeth¹
(hongfang.dong@cdhb.health.nz)
¹Community and Public Health, Canterbury District Health Board, Christchurch, New Zealand

Issue
The Fruit and Vegetable Co-op is a health promotion partnership between Community and Public Health (C&PH) at the Canterbury DHB, the Christchurch Anglican Cathedral, and the communities of Christchurch. The aim of the Co-op is to increase the quantity and variety of fruit and vegetables consumed among participating families by providing access to low cost fresh produce. Each week a selection of fruit and vegetables is purchased from a supplier, and volunteers pack and distribute the orders to distribution hubs. Members collect pre-ordered packs ($10 each, ≈8kg) from one of these hubs. Also included in the pack is a card with a recipe on one side and health information on the other side. Over a two-year period, Co-op membership increased dramatically and currently more than 2,000 packs of fruit and vegetables are ordered each week.

Aims
To conduct an evaluation to assess the impact of the Co-op on members, and guide C&PH’s future involvement.

Methods/actions
A paper-based questionnaire was developed including questions relating to demographics, motivations for membership, changes resulting from membership, fruit and vegetable intake, and food security. Eighteen of the forty distribution hubs were randomly selected, and all members present at the selected hub on the day orders were picked up were asked to participate.

Results/achievements
345 out of 511 invited members participated in the survey (response rate =67.5%). One fifth of respondents lived in areas with the highest deprivation scores (NZDep2013 deciles 9-10), and a further 38% lived in areas with moderate deprivation scores (NZDep2013 deciles 6-8). One quarter of respondents stated that they relied on others to provide food and/or money for food for their household ‘often’ or ‘sometimes’. The main motivations for using the Co-op were to save money (82.3%) and eat more healthily (67.8%). Many respondents reported that they ate more fruit and vegetables, and had tried new varieties of fruit and vegetables (73.3% and 81.7%, respectively), since joining the Co-op. Most respondents reported using the recipes and reading the health information provided in the packs. One in five respondents had become a Co-op volunteer since becoming a member.

Conclusions
Through active community involvement this cross-organisational collaboration provides greater access to fresh produce at low cost to members who may otherwise struggle to afford fruit and vegetables. As a result, members report an increase in the quantity and variety of fruit and vegetables consumed. The Co-op has increased opportunities for volunteering and social interaction, and for C&PH to distribute healthy cooking and general health information more widely.

Implications
This community-focused model has the potential to further enhance wellbeing and food security in areas of high need. It is recommended that C&PH continue to provide community networks, recipes, health information and support to this valuable project.

Acknowledgement
We would like to thank Janne Pasco and Ann Vanschevensteen for their extraordinary support in conducting the survey.
Victory Community Health – building capacity in communities at many levels

Kindra Douglas2, Jill Clendon1, Linda Liddicoat3, Lindie Nelson4, Julie Varney5, Hemaima Hughes6, Deborah Davies7
(vchinfo@victory.school.nz)
1Chairperson, Victory Community Health, Nelson; Adjunct Professor, Victoria University, Wellington Nursing policy adviser/researcher, New Zealand Nurses Organisation, Wellington; 2Director, Victory Community Health, Nelson; 3Researcher, Business Development Company, Nelson; 4Researcher, Business Development Company, Nelson; 5Managing Director, Maima Oranga Services Ltd, Nelson; 6Clinical Nurse Specialist (Lead) Primary Health Care, Mid Central DHB, Palmerston North

Victory Community Health (VCH) is a small charitable trust that runs a number of health-related activities and services out of a community centre at Victory Primary School in Nelson. Since its inception eight years ago, VCH has offered nurse-led services to community members based around a public health nursing approach. In 2012 a further nurse-led service was established offering an after-hours clinic to community members run by volunteer nurses. Building capacity in communities can occur at many levels and in many differing ways. Of particular interest in this study was the nature of the voluntary participation of nurses providing services in the after-hours clinic. While volunteerism amongst nurses is relatively common – particularly in relation to disaster response and work in third world countries (see for example Hardegger, 2013 and Whittaker et al., 2006) – there is little available information on the experiences of nurses who volunteer in their own communities in New Zealand. The study reported here evaluated the effectiveness of all the nurse services offered by VCH with this paper focusing more closely on the experiences of the nurses working at the clinics.

A mixed method approach combining quantitative and qualitative data collection and analysis within a community development framework was used. The approach was based on previous research method and design in this area (Clendon, 2004/5; Splann, Krothe & Clendon, 2006), with the added contribution of partnering with Māori. The research method also took into account that for some clinic users English is a second language, and oral interviewing is more culturally appropriate for many ethnic groups (Jahnke & Taiapa, 1999). The following data was collected: hospital admission and census data; anonymised clinic data collected by the nurses during consultation; interviews of clients and survey data from community members. A total of five interviews (three individual and two focus groups) with eight registered nurses and one practice assistant were also undertaken. A further fourteen nurses completed an online survey of their experiences working at the after-hours clinic.

Findings demonstrated an ethnically diverse community with a higher proportion of residents on benefits, and lower home ownership. DHB data showed community members admitted to hospital were more likely to be smokers and younger. Friendliness, ease of access, and the support offered were the main things people liked about the clinics. Participants believed the support and advice received enabled them to manage their own health more effectively and resulted in improvements to their health. Analysis of the interview data collected from nurse participants identified five core themes associated with their experiences of working in the clinic. These were people centred care, nurses as connectors of care, health delivery, community connection and resourcefulness. Nurses who volunteered in the after-hours clinic were involved because they wanted to give something back to the community, saw it as an opportunity to address inequalities and disparities in health, and as an opportunity for greater exposure to areas of clinical practice they had not previously been involved in.

The volunteer nurses at VCH work one evening shift of approximately three hours every four to six weeks. Three volunteer staff are always on duty - two registered nurses and a practice assistant. The focus is on building relationships with clients in a comfortable, friendly and welcoming environment, empowering
clients, advocacy, and walking alongside the client to gain the best healthcare for each client. The nurses are also proactive in connecting clients with relevant health and social services if needed. Clients frequently report being unable to afford the costs of going to the General Practitioner but are able to access care at the Nurse Led Clinic (NLC). The volunteer nurses reported gaining intrinsic reward from working at VCH including satisfying their desire to help people, working in client contact (some were currently in non-client contact roles), and meeting perceived unmet need. Working alongside colleagues with a diversity of clinical backgrounds and the resultant exposure to a range of skills was seen as important alongside a strong sense of professionalism and collegial support within the team. Altruism was a major motivator with this also reflected in the survey responses:

To try and provide healthcare for people who can't get it. So I guess you know altruistic but it also interests me and it's yeah it is another, I guess another area too, and it's good to have some experience, yes.

Both the altruistic rewards obtained through helping others, and the gains based on exposure to new colleagues and new clinical experiences, demonstrate why volunteer nurses may choose to contribute their time to the community. This is a common finding in other research exploring the reasons why nurses may volunteer and the benefits to the community (McDowell, 2002; Rojak et al., 2001).

Community-based initiatives use a variety of approaches to achieve their goals. This research demonstrates that nurse-led services are effective at improving self-reported health status amongst community members and empowering a self-responsible approach to health for families in the Victory community. In addition, the particular approach utilised at Victory demonstrates how building on volunteer resources to meet the needs of community members creates capacity at many levels - amongst both those providing services and those receiving services. Nurse-led services should be considered an innovative and appropriate approach to improving health outcomes in communities, and reducing social inequalities and barriers to services for vulnerable people.

References


Determining the health benefits of poultry industry compliance measures: The case of campylobacteriosis regulation in New Zealand

Gail Duncan¹
(flutetunes@hotmail.com)
¹Ministry for Primary Industries, Wellington, New Zealand

Introduction
Expert reports to the Food and Agricultural Organisation of the United Nations and the World Health Organisation conclude there is limited data quantifying and assessing the commercial application of interventions at primary production level in the poultry industry. The effects of interventions applied in a commercial setting on reducing the prevalence of contamination by campylobacter on broiler carcasses have not been quantified (FAO/WHO, 2009). There has been no validation of interventions, or any costing of such interventions, or quantifying of population health gains expected from them. This study attempts to add to literature in this area by addressing the value of preventative measures at the primary industry level to reduce disease. Campylobacteriosis is a gastrointestinal illness caused by infection with campylobacter bacteria. The onset of disease generally occurs within two to five days after ingesting the bacteria and the most common clinical symptoms are diarrhoea, nausea and vomiting lasting three to six days. The main route of transmission is foodborne (WHO, 2011).

Background
Campylobacteriosis notifications in New Zealand increased steadily from 1980-2003 and were examined to determine if it was real as opposed to a surveillance artefact (Baker, Sneyd, & Wilson, 2007). It was unclear what the likely causes of the increasing rate were. By the early 2000's poultry product was being identified as a major source of campylobacteriosis in New Zealand. A high proportion of poultry product at retail was known to be contaminated by campylobacter but proper cooking practices and care in handling were thought to be adequate measures to deal with this (Baker, Sneyd et al., 2007).

By the late 1990’s and early 2000 independent research determined that a significant foodborne source of campylobacter could be poultry. Further research supported this (Mullner et al., 2009). In 2009 the New Zealand Medical Journal referred to ‘a substantially foodborne epidemic of Campylobacter infection’ and updated on New Zealand’s largest ‘common source outbreak’ (Baker, Wilson, & Edwards, 2007).

The campylobacter epidemic in New Zealand received less attention than it warranted as there was public, scientific and government policy perception that the disease was ‘endemic’ (Mullner et al., 2010), a natural part of poultry final product (Bates, Hiett, & Stern, 2004; Fraser, Williams, Powell, & Cook, 2010). Case control studies, risk modelling studies and literature reviews were not sufficient to sway earlier action to support interventions by industry and government to reduce levels in campylobacter in that poultry final product. Poultry supplied for the New Zealand consumer is principally sourced from the New Zealand poultry industry. Consumer demand for poultry had been unaffected and remained high from 2004. There had been no product withdrawals.

In April 2007 testing of poultry carcass rinse samples for campylobacter enumeration at the end of primary processing commenced in addition of the existing National Microbiological Database (NMD) compliance programme. By April 2008 a campylobacter performance target had been developed by the regulator (NZFSA, 2008). However over this period the poultry industry had been developing interventions based on a series of activities that reduced pathogen loading on the bird on the farm and through primary processing. The immediate health benefit from actions undertaken by industry to meet the new compliance standards applied in 2007 and 2008 was a 58% reduction in notifiable cases of campylobacteriosis in New Zealand. This reduction has been maintained since then.
Methods/design
To examine the economic justification of this regulatory intervention costs to the industry and the regulator, the cost of illness and any resulting benefits were estimated. It appears to be the first time in New Zealand that industry compliance costs have been assessed in relation to reduction of the disease burden. To investigate this I employ a CBA. The advantage of a CBA is that the economic effectiveness of interventions applied by industry to ensure compliance with the microbiological programme can be determined. In this case the proposals for more stringent monitoring went ahead without prior certainty, or pre-knowledge of the extent of the benefit to be expected.

Results
Non-capital compliance costs
When this research project commenced in January 2010 there were nine poultry broiler processors who participated in the National Microbiological Database (NMD) compliance programme (noting that these nine were the total number of poultry broiler processors operating in New Zealand at the time). Eight of whom were members of the Poultry Industry Association of New Zealand Inc. (PIANZ). Companies A (with multiple processing sites) and B (one processing site), both members of PIANZ, contributed costing information. The non-capital costs for companies A and B of the NMD after the campylobacter programme was added in April 2007 were estimated as $260,630 in 2008/2009. Total costs for these two companies represent approximately 70% of the total industry costs (personal communication Michael Brooks, chief executive, PIANZ). Table 1 below represents the non-capital costs of implementation of the poultry campylobacter programme for all poultry broiler processors.

<table>
<thead>
<tr>
<th>COMPANY A/ NMD after Campylobacter</th>
<th>Labour</th>
<th>Service/ cash cost</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Programme activities</td>
<td>$1,800</td>
<td></td>
<td>$1,800</td>
</tr>
<tr>
<td>2 Staff training</td>
<td>$3,000</td>
<td></td>
<td>$3,000</td>
</tr>
<tr>
<td>3 IT facilities</td>
<td>$15,600</td>
<td></td>
<td>$15,600</td>
</tr>
<tr>
<td>4 Review of results</td>
<td>$18,200</td>
<td></td>
<td>$18,200</td>
</tr>
<tr>
<td>5 Sampling</td>
<td>nil</td>
<td></td>
<td>nil</td>
</tr>
<tr>
<td>6 Laboratory analysis</td>
<td>$16,500</td>
<td></td>
<td>$108,030</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td>$163,130</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COMPANY B/ NMD after Campylobacter</th>
<th>Labour</th>
<th>Service/ cash cost</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Programme activities</td>
<td>$12,000</td>
<td></td>
<td>$12,000</td>
</tr>
<tr>
<td>2 Staff training</td>
<td>$4,000</td>
<td></td>
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<td>3 IT facilities</td>
<td>nil</td>
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<tr>
<td>4 Review of results</td>
<td>$20,000</td>
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<td>$20,000</td>
</tr>
<tr>
<td>5 Sampling</td>
<td>$11,500</td>
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</tr>
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<td>6 Laboratory analysis</td>
<td>$45,000</td>
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<td>$45,000</td>
</tr>
<tr>
<td>7 Responses</td>
<td>$2,000</td>
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<td>$2,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td>$97,500</td>
</tr>
</tbody>
</table>

**COMBINED TOTAL** $260,630

A and B make up 70% of industry

The costs included the cost of the PIANZ providing technical advice to industry, meetings with industry, the regulator, and researching interventions and public health consequences. Table 2 below represents estimates of total industry compliance costs.
Table 2: Total industry compliance costs

<table>
<thead>
<tr>
<th></th>
<th>2008/2009 After Campylobacter testing included</th>
</tr>
</thead>
<tbody>
<tr>
<td>All processors</td>
<td>$372,329</td>
</tr>
<tr>
<td>PIANZ</td>
<td>$5,308</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$377,637</strong></td>
</tr>
</tbody>
</table>

Note: The 'All processors' figure is based on dividing the sum of processor A and B by a factor of 0.7

**Capital costs of interventions**

In addition to the annual compliance costs, there were initial investments in interventions. These investments occurred between late 2007 and April 2008 after some trialling and consideration of the applicability to the New Zealand campylobacter epidemic and poultry industry standard practices. Capital costs occurred concurrently with the implementation of the programme. Capital upgrades made to improve washing/chilling and/or post chill dip over 2007/08 prior to the imposition of regulatory responses cost company A $950,000, and company B $460,000 or a total of $1,410,000 for both companies. The total actual capital investment in the Campylobacter Strategy by industry is unknown at this stage. Applying the 70% factor, the total capital investment is estimated at $2,014,000. The ongoing cost following the capital investment in intervention systems is the cost of chemicals; citric acid and sodium chlorite, estimated at $500,000 per annum overall (R. Biggs, personal communication 2010). On-going maintenance costs have been included with the annual costs of the compliance programme in Table 3 below along with capital costs.

Table 3: Ongoing and capital costs for industry

<table>
<thead>
<tr>
<th>Cost factor</th>
<th>Industry cost per annum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total industry 2008/2009 (Table 2)</td>
<td>$377,637</td>
</tr>
<tr>
<td>Intervention system chemicals per annum</td>
<td></td>
</tr>
<tr>
<td>Total NMD compliance 2008/2009</td>
<td>$877,637</td>
</tr>
<tr>
<td>CAPITAL INVESTMENT 2007/2008</td>
<td>$2,014,000</td>
</tr>
</tbody>
</table>

**Estimation of cost to the regulator (NZFSA)**

The government cost for the poultry Campylobacter Strategy was $950,000 in 2009 (Gadiel, 2010, p. 14) which converts to $885,000 in 2007 dollars.

**Estimation of the cost of illness**

Scott et al. estimated the total cost of foodborne illness in 1999 was $55m, of which $40m (73%) could be attributed to campylobacter (Scott, Scott, Lake, & Baker, 2000). Cressey and Lake estimated total foodborne disease at $85.3m in 2005, of which an estimated $74m (87%) was associated with foodborne campylobacteriosis (Cressey & Lake, 2008). Gadiel estimated the total cost of foodborne disease in 2009 cost in New Zealand, excluding government and industry costs, was $131m with $36m due to foodborne campylobacteriosis (27%) (Gadiel, 2010). Gadiel stated that the relatively low percentage attributable to poultry in 2009 was likely to be due to interventions undertaken by the poultry industry in response to the Campylobacter Strategy following 2007. All totals exclude government and industry preventative measures. Table 4 below represents the above figures of cost of illness in constant 2007 dollars for comparison.

Table 4: Cost of foodborne campylobacteriosis converted to constant 2007 dollars $m

<table>
<thead>
<tr>
<th></th>
<th>1999 Scott et al</th>
<th>2005 Cressey and Lake</th>
<th>2009 Gadiel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total health</td>
<td>1.6</td>
<td>4.8</td>
<td>2.2</td>
</tr>
<tr>
<td>Total indirect</td>
<td>47.4</td>
<td>72</td>
<td>31.5</td>
</tr>
<tr>
<td>TOTAL</td>
<td><strong>49</strong></td>
<td><strong>77</strong></td>
<td><strong>34</strong></td>
</tr>
</tbody>
</table>
The estimated cost of campylobacteriosis from Cressey and Lake is the nearest chronologically to 2007, but will underestimate the cost of disease at the beginning of 2007 as the epidemic had just peaked at the end of 2006 at 15,900 notified cases per annum; or approximately 159,000 community cases. The 10:1 ratio has been generally applied on the economic analyses I have reviewed, including the recent United Kingdom Infectious Intestinal Disease study (Tam, Rodrigues, & Viviani, 2012). The number of community cases estimated by Cressey and Lake was 123,000. Thus the likely cost due to foodborne campylobacteriosis at the start of 2007 would be $77m x (159,000 cases/123,000 cases) = $99m per annum. For the total health care costs only this would be $4.8m x (159,000 cases/123,000 cases) = $6.2m. To summarise; the estimated cost of disease attributable to campylobacter at the start of 2007, prior to the poultry campylobacter NMD programme, is $99m of which $6.2m is total health care costs and $93m indirect costs.

**Reduction in the disease burden, the ‘benefit’**

In 2006 there were 385.6 campylobacter cases per 100,000. By the end of 2008 this had fallen to 166.3 per 100,000 (ESR, 2010). This was a 58% reduction in notifiable cases based on total case figures derived from the final 2006 and 2008 figures (15,873 cases in 2006 compared to 6,694 cases in 2008). The principal factor that contributed to this decline was the implementation of the Campylobacter Strategy which involved substantial investment by the poultry industry (Sears et al., 2011). Assuming a linear relationship between the number of cases and estimated cost of illness this implies:

- 58% savings of $99m for TOTAL = $57.4m, and
- 58% savings of $6.2m, total health (excluding indirect costs) = $3.6m

These benefits accrue each year.

**Assumptions**

My assumptions are:

1. that the compliance programme will maintain this reduction in campylobacter levels;
2. the total community cases are ten times the notifications; and
3. that there is a linear relationship between notifications and health effects.

The application of this common compliance standard would be expected to have an initial impact, level out and then possibly rise again as the focus shifts away from the original epidemic. A loss of industry experience of factors related to contamination of broiler carcasses, and development of maintenance problems associated with interventions or other standard processes can occur. This type of pattern is described as the Bathtub curve (NIST/SEMA TECH). I have not assumed a possible future rise in notifications. Notifications have remained at around the 2009 level of 7177 and are presently recorded at 7033 campylobacteriosis notifications for the year from 1 January to 31 December 2012. (http://www.surv.esr.cri.nz/PDF_surveillance/MthSurvRpt/2012/201212DecNat.pdf).

**Cost Benefit Analysis**

I estimate that from $99m cost of campylobacter illness at the beginning of 2007, the reduction in notifications led to only $41.6m being incurred over 2007/2008. That is a benefit of $57.4m. To estimate the benefits from the investment in the compliance programme a Net Present Value (NPV) calculation was undertaken, using a 10% discount rate. An Internal Rate of Return (IRR) was also calculated as IRR is a widely recognised technique used by business, industry and public policy agents to estimate the financial return of an investment. In estimating the benefits to health from investment in compliance represented in Table 5 below the IRR calculated to 1925% and the benefit-cost ratio was 25.74 which is a very high benefit-cost ratio.
Table 5: Estimating benefits to health from investment in compliance

<table>
<thead>
<tr>
<th>Year</th>
<th>Costs undiscounted Industry</th>
<th>Costs undiscounted Government</th>
<th>Total costs</th>
<th>Benefits undiscounted: the 58% reduction in cost of illness</th>
<th>Net Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>12778</td>
<td>2.01</td>
<td>0.88</td>
<td>2.89</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>6694</td>
<td>0.88</td>
<td>0.88</td>
<td>1.76</td>
<td>57.40</td>
</tr>
<tr>
<td>2009</td>
<td>7177</td>
<td>0.88</td>
<td>0.88</td>
<td>1.76</td>
<td>57.40</td>
</tr>
<tr>
<td>2010</td>
<td>7345</td>
<td>0.88</td>
<td>0.88</td>
<td>1.76</td>
<td>57.40</td>
</tr>
<tr>
<td>2011</td>
<td>7000</td>
<td>0.88</td>
<td>0.88</td>
<td>1.76</td>
<td>57.40</td>
</tr>
<tr>
<td>2012</td>
<td>7000</td>
<td>0.88</td>
<td>0.88</td>
<td>1.76</td>
<td>57.40</td>
</tr>
<tr>
<td>2013</td>
<td>7000</td>
<td>0.88</td>
<td>0.88</td>
<td>1.76</td>
<td>57.40</td>
</tr>
<tr>
<td>2014</td>
<td>7000</td>
<td>0.88</td>
<td>0.88</td>
<td>1.76</td>
<td>57.40</td>
</tr>
<tr>
<td>2015</td>
<td>7000</td>
<td>0.88</td>
<td>0.88</td>
<td>1.76</td>
<td>57.40</td>
</tr>
<tr>
<td>2016</td>
<td>7000</td>
<td>0.88</td>
<td>0.88</td>
<td>1.76</td>
<td>57.40</td>
</tr>
<tr>
<td>2017</td>
<td>7000</td>
<td>0.88</td>
<td>0.88</td>
<td>1.76</td>
<td>57.40</td>
</tr>
<tr>
<td>Sum</td>
<td>10.81</td>
<td>9.68</td>
<td></td>
<td>20.49</td>
<td>574.00</td>
</tr>
</tbody>
</table>

IRR (Internal rate of return) 1925%

Discounted 10%

<table>
<thead>
<tr>
<th>Year</th>
<th>Costs Total costs discounted</th>
<th>Benefits Benefits discounted</th>
<th>Net Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2.89</td>
<td>0.00</td>
<td>-2.89</td>
</tr>
<tr>
<td>1</td>
<td>1.60</td>
<td>52.18</td>
<td>50.58</td>
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<tr>
<td>2</td>
<td>1.45</td>
<td>47.44</td>
<td>45.98</td>
</tr>
<tr>
<td>3</td>
<td>1.32</td>
<td>43.13</td>
<td>41.80</td>
</tr>
<tr>
<td>4</td>
<td>1.20</td>
<td>39.20</td>
<td>38.00</td>
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<tr>
<td>5</td>
<td>1.09</td>
<td>35.64</td>
<td>34.55</td>
</tr>
<tr>
<td>6</td>
<td>0.99</td>
<td>32.40</td>
<td>31.41</td>
</tr>
<tr>
<td>7</td>
<td>0.90</td>
<td>29.46</td>
<td>28.55</td>
</tr>
<tr>
<td>8</td>
<td>0.82</td>
<td>26.78</td>
<td>25.96</td>
</tr>
<tr>
<td>9</td>
<td>0.75</td>
<td>24.34</td>
<td>23.60</td>
</tr>
<tr>
<td>10</td>
<td>0.68</td>
<td>22.13</td>
<td>21.45</td>
</tr>
</tbody>
</table>

PV 13.70 NPV 352.70 B/C ratio (Benefit cost ratio) 25.74

To examine if the costs been underestimated or benefits exaggerated I conducted a sensitivity analysis with discount rates from 0% to 10%.

Table 6: Sensitivity analysis of NPV

<table>
<thead>
<tr>
<th>Discount rate</th>
<th>10.0%</th>
<th>7.0%</th>
<th>5.0%</th>
<th>3.5%</th>
<th>0.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>B/C ratio</td>
<td>25.74</td>
<td>26.43</td>
<td>26.89</td>
<td>27.24</td>
<td>28.01</td>
</tr>
</tbody>
</table>

The results of this sensitivity analysis show high B:C ratios regardless of discount rate; a further confirmation that the investment has a high payoff.
Removing indirect costs
To check if the benefits have been exaggerated calculations are repeated in the following tables, excluding indirect costs (termed as indirect non-health care costs by Cressey and Lake). This is on the basis of work by Koopmanschap et al. (Koopmanschap, Rutten, van Ineveld, & van Roijen, 1993) suggesting that such costs may be seriously over-estimated when costed by human capital methods. Using campylobacteriosis records from 2005 (adapted from tables 8 and 9 Cressey and Lake (2008) (Cressey & Lake, 2008)) 97.3% of illnesses are short term gastro-enteritis lasting for 3 to 7 days. The more complex sequelae (reactive arthritis (ReA), Guillain-Barré syndrome (GBS) and inflammatory bowel disease (IBD)) make up only 2.7% of the estimated total cases.

With ReA work is usually uninterrupted. IBD usually put persons out of work intermittently. Only for GBS could sick leave be considered significant at 90 to 123 days (Cressey & Lake, 2008). This translates to only 0.02% of cases resulting in long term sick leave. It is these long-term cases for which Koopmanschap et al.’s criticisms have the most validity. The effect of this large weighting on the benefit cost ratio can be demonstrated by conducting an NPV removing all the indirect costs where the 58% savings of $6.2m Total health (excluding indirect costs) = $3.6m as demonstrated in Table 7 on the following page.

Comparing the benefits if only direct and non-direct health benefits are included as represented in Table 7 above; the IRR reduces to 63% and the cost benefit ratio to 1.61. The cost benefit ratio is still greater than 1.0, and the IRR remains high. These two economic tests still show a strong argument for the investment in compliance.

Future targets
A further 50% reduction in campylobacter would result in a further $20.8m saved per annum ($99m - $57.4m = $ 41.6m divided by 2). The level of investment required by the poultry industry to effect or contribute to a further 50% reduction is however unknown. Reviewing the attribution studies for 2006 and 2008 published by Lake, Hall and Ball (2011) the proportion accounted for by an identifiable source was poultry ~60% in 2006 compared to ~40% in 2008. The estimated notifications attributed to other pathways remained relatively constant for both years (Lake et al., 2011, p 51,). This supports my assumption that the reduction in notifications was due principally to changes in the poultry processing. Other attribution pathways in New Zealand include pets, red meat, recreational water, drinking water, other animal contact, other foods and recreational exposure.
Abstracts

Source data undiscounted for a 10 year horizon

<table>
<thead>
<tr>
<th>Year</th>
<th>Confirmed notified cases per annum</th>
<th>Costs undiscounted Industry</th>
<th>Costs undiscounted Government</th>
<th>Total costs undiscounted: the 58% reduction in cost of illness</th>
<th>Net Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>$12778</td>
<td>$2.01</td>
<td>$0.88</td>
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<td></td>
</tr>
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<td>2008</td>
<td>$6694</td>
<td>$0.88</td>
<td>$0.88</td>
<td>$1.76</td>
<td>$3.6</td>
</tr>
<tr>
<td>2009</td>
<td>$7177</td>
<td>$0.88</td>
<td>$0.88</td>
<td>$1.76</td>
<td>$3.6</td>
</tr>
<tr>
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<td>$7345</td>
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<td>$0.88</td>
<td>$1.76</td>
<td>$3.6</td>
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<tr>
<td>2012</td>
<td>$7000</td>
<td>$0.88</td>
<td>$0.88</td>
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<td>$3.6</td>
</tr>
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<td>$7000</td>
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<td>$7000</td>
<td>$0.88</td>
<td>$0.88</td>
<td>$1.76</td>
<td>$3.6</td>
</tr>
<tr>
<td>2015</td>
<td>$7000</td>
<td>$0.88</td>
<td>$0.88</td>
<td>$1.76</td>
<td>$3.6</td>
</tr>
<tr>
<td>2016</td>
<td>$7000</td>
<td>$0.88</td>
<td>$0.88</td>
<td>$1.76</td>
<td>$3.6</td>
</tr>
<tr>
<td>2017</td>
<td>$7000</td>
<td>$0.88</td>
<td>$0.88</td>
<td>$1.76</td>
<td>$3.6</td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td>IRR (Internal rate of return) 63%</td>
<td></td>
</tr>
</tbody>
</table>

Discounted 10% Costs $m Benefits $m Net Benefits $m

<table>
<thead>
<tr>
<th>Year</th>
<th>Total costs undiscounted</th>
<th>Benefits undiscounted</th>
<th>Net Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
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<td>13.70</td>
<td>22.12</td>
<td>8.42</td>
</tr>
</tbody>
</table>

B/C ratio (Benefit cost ratio) 1.61

Conclusions

The campylobacter epidemic in New Zealand has been brought into check by poultry industry actions undertaken to achieve the targets of a compliance programme. There are costs associated with this programme that have been borne by industry. In a normal commercial environment the capital expenditure associated with reducing the level of campylobacter on poultry carcasses at the end of slaughter and dressing would not have been invested. Neither could the effectiveness of the health outcomes have been predicted at the time. This paper shows the benefit-cost ratio of the capital investment in retrospect.

The preceding NMD programme with only E. coli and salmonella testing requirements did not have any significant effect on industry practices related to campylobacter. “On farm” did it for salmonella biosecurity, but these feed/hatchery and on farm biosecurity changes seemed to do nothing for campylobacter. It was changes during primary processing from crates used to carry the birds, equipment maintenance, evisceration...
procedures, chlorination levels in spin chill, use of interventions, smarter procedures and attention to detail of good management practice that worked for campylobacter.

New Zealand's campylobacteriosis epidemic had been identified as largely a foodborne disease, with poultry as a significant part of the problem. To fix the problem the level of campylobacter contamination of poultry carcasses at end of slaughter and dressing needed to be measured. The NMD was/is useful in monitoring production every processing day with the data being submitted to the regulator. Industry then re-evaluated investment in interventions or upgrading of processor with the intention of improving hygienic standards. At the time their investments were made neither they nor the regulator could have anticipated that it would make such a considerable difference to the number of campylobacter notifications.

I then examined approaches to estimating indirect costs as I was concerned that the human capital method of estimating indirect costs associated with the foodborne disease campylobacteriosis could overstate the costs, and therefore the benefit from reduction in campylobacter cases. I found in the case of campylobacteriosis there are a very small number of fatalities and/or long term complications. The economic burden to New Zealand is in the actual lost days (sick leave) and lost production of a large number of people off work for short periods. Thus even making allowances for the difficulties in getting accurate cost data, and recognising that savings from reduction on indirect costs are probably over-estimated substantially, the economic CBA clearly demonstrates that the compliance measures were beneficial to New Zealand.

A clear positive linkage between the industry and regulatory cost of compliance and the internal social benefit to the New Zealand economy has been demonstrated. By addressing the primary source of this foodborne disease a more economically efficient outcome in the reduction of disease has been achieved. Further significant reductions in the disease burden can be expected if further focus and investment can be undertaken by the poultry industry in collaboration with the regulator.

To sum up an economic benefit has been clearly demonstrated by the application of a suitable compliance programme requiring investment by industry. Note that campylobacteriosis is still not eliminated in New Zealand. Current levels of campylobacteriosis notifications are equivalent to approximately 7,000 notifications per annum or 70,000 incident cases. Further significant reductions in the incidence of this disease in New Zealand are still required if we are to reach the incidence rates seen in other comparable developed countries (Lane & Briggs, 2014).

**Acknowledgements**
Des O’Dea (Otago University Wellington, School of Public Health) and Grant Scobie (Treasury), PIANZ and poultry industry contributors, NZFSA for granting me a Chief Executives award in December 2007 to undertake this study.

**References**


Achieving Smokefree 2025: Evidence on the hardening hypothesis from New Zealand

Richard Edwards1, Rhiannon Newcombe, Darren Walton, Kate Holland, Danny Tu2
(Richard.edwards@otago.ac.nz)
1ASPIRE 2025, Department of Public Health, University of Otago, Wellington, New Zealand
2Health Promotion Agency, Wellington, New Zealand

Issue
The ‘hardening’ hypothesis proposes that as smoking prevalence reduces the remaining smokers may increasingly consist of ‘hardened smokers’ who are less motivated to or find it more difficult to quit (Hughes, 2011). Possible facets of hardening which have been proposed and could be assessed include (i) smokers becoming more addicted and hence less able to quit; (ii) smokers becoming less motivated to quit and making less quit attempts; and (iii) the outcome of hardening reducing successful population quit rates among smokers. Data on whether hardening is happening in a country which has adopted a smokefree goal of reducing smoking prevalence to close to zero has not been presented.

Aims
To investigate whether there is evidence to support the hardening hypothesis in New Zealand using data from nationally representative surveys between 2008 and 2012.

Methods
The Health and Lifestyles Survey is a face-to-face, population based survey using a nationally representative sample of around 2,000 adults aged fifteen-plus years. Data is collected on a range of health behaviours including in-depth data on smoking and smoking-related behaviours. Data from the survey relevant to assessing the hardening hypothesis includes: daily smokers (as proportion of all current smokers), number of recent quit attempts, and recent quit rates (becoming an ex-smoker in the last 1-12 months).

Results
Current (at least monthly) smoking prevalence fell from 20.2% to 16.9% between 2008 and 2012. The equivalent figures for daily smoking were 17.8% and 15.3%.

The indicators of hardening changed as follows:
The proportion of daily smokers among all current smokers varied little and was between 86% and 90% between 2008 and 2012. The proportion of daily smokers who had made no quit attempts in the previous year was 53.7% in 2008 and 54.1% in 2012, with no trend apparent. The proportion of daily smokers who had four or more quit attempts in the previous year increased from 4.3% in 2008 to 8.7% in 2012. The successful quit rate among daily smokers (Defined as [number of ex-smokers who report quitting in last one to twelve months]/[number of ex-smokers who report quitting in last 1-12 months] + [number of current smokers]) increased slightly from 8.9% in 2008 to 12.0% in 2012. Findings were similar when stratified by gender and ethnicity (Māori and non-Māori).

Conclusions
This data is the first to investigate whether hardening is occurring in a country that has adopted an endgame goal for tobacco smoking. The findings suggests that over a period when there were marked declines in daily and current smoking there was little evidence of hardening, with a trend towards increases in recent quit rates over time. The increase in the proportion of smokers making multiple quit attempts in the previous year could be interpreted in support of (increase in proportion of smokers finding it difficult to quit) or against (more smokers determined to quit) the hardening hypothesis.
**Implications**
This findings suggest that current tobacco control approaches are being effective and there is no evidence yet of the need to tailor interventions, including smoking cessation support, to address an increasingly hardened population of smokers. However, monitoring whether hardening is occurring will continue to be important and the policy and practice implications considered should it emerge on the route to Smokefree 2025.

**References**
Youth preferences for roll-your-own versus ready-made cigarettes: Trends in repeated national surveys (2006-13)

Richard Edwards¹, Benjamin Healey¹ and Janet Hoek¹
(Richard.edwards@otago.ac.nz)
¹Otago University, New Zealand

Issue
New Zealand smokers consume more roll-your-own (RYO) tobacco than smokers in other countries. Most RYO smokers report using loose tobacco because it is cheaper than factory-made (FM) cigarettes, which may mean it is more readily supplied by adults to youth. Many smokers also mistakenly regard RYO tobacco as more “natural” and associate it with reduced harm. In reality, RYO cigarettes are at least as hazardous as FM cigarettes and contain higher additive concentrations, including sweeteners that may appeal to children. Thus RYO tobacco use may be inhibiting declines in youth smoking initiation and maintenance.

Aims
To investigate youth RYO use over time and identify factors associated with it.

Methods
We analysed data from a large annual school-based national survey of New Zealand’s year 10 (14-15 year old) students from 2006-2013. Participants were asked whether they usually smoked RYO or FM cigarettes, along with items relating to demographics, smoking status and source of supply. We examined prevalence of RYO and FM use among at least weekly smokers, and used binary logistic regression models for each year to explore determinants of RYO use.

Results
Between 6,663 (2006) and 3,143 (2013) year ten students identifying themselves as current smokers (any regularity) responded to the question about type of cigarette smoked. Prevalence of ‘at least weekly’ smoking declined from 12% [95% CI ±0.5%] to 6% [±0.3%] over that time. Among smokers, around 80% each year reported usually smoking either RYO or FM cigarettes (the remainder did not answer or answered ‘other’, possibly because they had no usual type). RYO use was high at 45% [±3%, vs 36% ±3% for FM] in 2006, reducing slightly to 40% [±3% vs 38% ±3% for FM] in 2013. More respondents reported usually smoking RYO than FM cigarettes in each year except 2012. Graphical analysis of trends in the ratio of RYO:FM suggest RYO use declined after 2010, possibly corresponding to a differential increase in tax on RYO tobacco in that year. RYO tobacco use was significantly more likely amongst those who initiated smoking earlier, whose main source of tobacco was a caregiver, and those who smoked at least weekly. However, Asian or Pacific youth were less likely to usually smoke RYO tobacco.

Conclusions
A very high proportion of Year ten smokers usually smoked RYO cigarettes. Youth smoking of RYO tobacco appeared to decline relative to FM cigarettes following a differential tax increase in 2010. However, RYO remained at least as popular as FM cigarettes and was differentially preferred by longer-term and higher-frequency youth smokers. These findings suggest RYO tobacco supports ongoing youth smoking initiation and maintenance.

Implications
Efforts to reduce smoking uptake among youth in New Zealand should take into account these high levels of RYO use. In particular, further differential excise tax increases for RYO tobacco appear warranted if we are to accelerate the decline in youth smoking.

Acknowledgements
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Waiting to See the Doc: Exploring the Journey into Primary Care

Dr Kyle Eggleton¹
(k.eggleton@auckland.ac.nz)
¹Department of General Practice and Primary Health Care, University of Auckland, Auckland, New Zealand

Issue
Many people face barriers in accessing primary care. This is most pronounced for Māori (Davis, Lay-Yee, Sinclair, & Gribben, 1997; Reid & Robson, 2007; Malcolm, 1996) and a number of marginalised demographic groups such as mental health consumers (Friedman, 1994) and youth (Tylee, Haller, Graham, Churchill, & Sanci, 2007). Most literature focuses on financial barriers however it is evident that a number of other barriers exist as well, including the acceptability of a practice. Acceptability relates to the attitudes that clients/ consumers/patients have about the personal and practice characteristics of health care providers (Penchansky & Thomas, 1981). One of the key figures within general practice, that facilitates access for patients, is the receptionist. They often determine who can literally enter general practice and who can see the doctor in a timely manner. From a patient perspective, receptionists are sometimes seen in a negative light (Strathmann & Hay, 2009; Arber & Sawyer, 1985).

Aims
This study explores patient perspectives on the role of the receptionist and the waiting room. It explores the journey that people make in attempting to make an appointment, waiting to see the doctor, and what the barriers and enablers are.

Methods
This is a qualitative study that is underpinned by a participatory visual methodology (PVM). The defining feature of PVM is the engagement and collaboration with participants in shared meaning making. This occurs through the creation of a visual representation of participants’ experiences. Drawings are not just superficial symbols of an experience but also representative of a participant’s social context (Guillemin, 2004). They are felt to better express thoughts and emotions that are not easily put into words (Kearney, 2004). In addition PRV challenges the privileging of the written and spoken word that tends to dominate qualitative research (Rose, 2007).

Thirteen participants were recruited from demographic groups that historically report poorer access to primary care or more difficult engagement with receptionists (Arber & Sawyer, 1985; Offredy, 2002). These include youth, parents with young children, mental health consumers and Māori. Participants were interviewed and invited to draw a picture that represents their idealised journey in:
1. Making an appointment;
2. Interacting with receptionists and
3. Waiting in a waiting room.

Interviews were transcribed and the drawings underwent shared analysis. The data, both interviews and discussion on the drawings, were thematically analysed using grounded theory.

Results
Results of the study indicate that people describe both negative and positive experiences in accessing general practice. One preliminary theme will be presented here - that of privileged visibility.
Participants report that they find being greeted and then watched by the receptionist reassuring. From their perspective if they are acknowledged and know that they are being observed then they can be more confident that they are placed in the queue to see the doctor. In addition if they are unwell then observation by the receptionist may mean that they might be re-prioritised. Participants often discussed wanting to have a clear line of sight to the receptionist. They wanted to be seen and for receptionists to become the intermediary between themselves and the doctor.

However participants also described not being seen by receptionists. Their explanation for this included receptionists being too busy with their administrative role. They were reported, by participants, as being too preoccupied with paper work and as a result becoming distracted from being the intermediary for patients. The busyness of receptionists impeded the development of relationships and subverted attention away from patients.

When receptionists did observe patients it was not always reassuring. Some participants discussed how they felt judged by how receptionists looked at them. One participant described this as the ‘evil eye’. It was felt by many that receptionists discriminated against them because they were Māori, had a chronic mental health condition or had noisy children. It was not only the receptionist that had the evil eye but also other people within the waiting room. Many participants discussed feeling judged or labelled. As a result participants wished for a degree of invisibility. They would avoid eye contact and separate from others physically. One participant described entering the waiting room as like running the gauntlet.

**Conclusion**

When patients enter the waiting room they often present in a vulnerable state. They are exposing themselves both physically and mentally to someone else. This may create a heightened sense of vulnerability and a feeling that other people may be able to perceive what is wrong with them. In the waiting room this can cause anxiety. Participants in this study reported feeling judged and labelled by both other patients and receptionists, which leaves them wishing that they were invisible. However a tension arises between not being noticed and wanting to be noticed by the doctor's intermediary in the waiting room - the receptionist. It is to the receptionist that they privilege their visibility. Despite this, receptionists may fail to notice them and can be distracted by the busyness of their job.

**Implications**

Receptionists hold an important role in facilitating access into primary care. This study indicates that acknowledging patients on arrival is important in making patients feel welcomed. In addition receptionists that provide ongoing non-judgmental observation may make patients feel that they are being cared for. This may improve the acceptability of general practice.

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**References**


What does gambling harm have to do with climate change?

Sara Epperson¹
(sepperson@pgfnz.org.nz)
¹Problem Gambling Foundation of New Zealand, Christchurch, New Zealand

Issue
In seeking to reduce gambling harm, one of the most significant barriers to achieving positive public health outcomes is the actions of the gambling industry. The tactics of the gambling industry, while powerful, are also aligned with other industrially-produced public health harms.

Aims
The Problem Gambling Foundation (PGF) engaged in a literature review in order to inform strategy around future work. Though initially it seemed the review could inform PGF’s work, the review could also inform strategy and future work of partnership or other collaborative efforts.

Method/actions
The literature review began by comparing the tobacco industry to the gambling industry. In the ongoing review, the actions of the gambling industry fit into a much larger framework. Thus, the work widened to include comparisons between the gambling industry and the industries behind other industrially-produced public health harms.

Results/achievements
The approach taken by the gambling industry (or “big gambling) matches those taken by the other “big” industries—tobacco, oil, alcohol, and even infant formula. While comparisons between gambling and tobacco offered worthwhile comparisons in the short to medium-term, considering the ramifications of “big oil” on public health allows an examination of gambling harm from a more profound standpoint. For one, it shakes up a belief that harms can be reversed. Moreover, the idea of halting in climate change is a reminder that the ultimate goals of public health will not come through isolated projects and will not come without fundamental cultural changes that challenge deeply-entrenched worldviews.

Conclusions
Although each particular area retains some uniqueness or particular idiosyncrasies, it is possible to link the work being pursued in each of these sectors into a larger movement. Sectors may set sights on short to medium-term projects to reduce or minimise industrially-produced harms, but sustainable long-term impacts require commitment to an alternative world view that challenges the systems that condone harm production.

Implications
The field of public health is well-prepared to lead such a movement. The Public Health Association of New Zealand could be a useful sounding-board for how our field could incorporate a unifying, overarching into our core business.
Smokefree New Zealand - A Nation’s commitment to stop the damage caused by smoking

Navid Foroutan¹
(navid_foroutan@moh.govt.nz)
¹Ministry of Health, Wellington, New Zealand

Issue
Smoking is the single leading preventable cause of early death in New Zealand. Half of all long-term smokers will die of a smoking related illness, losing an average of fifteen years of life. An estimated 4,500 to 5,000 New Zealanders die each year due to smoking or exposure to second-hand smoke. Smoking related disease is a major cause of health inequality for Māori compared to the rest of the population. The costs of smoking to New Zealand’s economy is also significant and includes premature mortality, lost productivity due to smoking caused morbidity and smoking related health care costs.

Aims
In March 2011 the Government adopted the Smokefree 2025 goal for New Zealand. This was in response to the recommendations of a landmark Parliamentary inquiry by the Māori Affairs select committee. This ambitious goal establishes New Zealand as one of the first countries in the world with such a strong commitment to reducing death and disease caused by smoking at a national level.

Methods/actions
New Zealand is at the forefront of tobacco control internationally and has made steady progress in reducing smoking prevalence and tobacco consumption. To achieve the goal of Smokefree 2025, a comprehensive range of measures is needed to:
- protect children from exposure to tobacco marketing and promotion;
- reduce the supply and demand for tobacco and
- provide the best possible support for quitting.

Many actions related to these measures have either been implemented or are under consideration in New Zealand. Some notable examples include: banning tobacco displays, plain packaging, tobacco tax increases, and better help for smokers to quit health target and Pathway to Smokefree 2025 innovation fund.

Results/achievements
According to the 2013 Census, 15% of the adult population in New Zealand smoke (463,000 adult smokers). This exhibits a drop of 23% from 598,000 at the last census in 2006. Even more encouraging is the fact that smoking prevalence among Māori has dropped from 42.2% in the 2006 Census to 32.7% in 2013.

Conclusions
Evidence suggests that the most successful approaches to tobacco control include those with a multifaceted and diverse range of activities that target legislation, health promotion and smoking cessation. Building on the success of the initiatives mentioned above, the Government will continue to employ such a combination approach to reduce the prevalence of tobacco use and the harm it causes.

Implications
The smoking rate in New Zealand is currently at its lowest point in history and one of the lowest in the world. Evidence indicates that increasing number of young people have never tried smoking. Additionally, the outstanding leadership and commitment provided by the government and New Zealand tobacco control sector over the past few decades could be used as a role model for other areas of health sector such as alcohol harm reduction, obesity prevention and problem gambling services.
Health Targets: A public health success

Navid Foroutan¹ and Heather Button¹
(heather_button@moh.govt.nz)
¹Ministry of Health, Wellington, New Zealand

Issue
PHOs play an important role in improving the health of New Zealanders. They operate by supporting General Practitioners to deliver primary care services or by delivering primary care services directly, to PHO enrolled patients. Although PHOs are funded by DHBs, the General Practices they represent are independent businesses. This creates an interesting dynamic in terms of tackling public health issues and implementing national priorities.

Aims
In 2009, the New Zealand government identified six national health targets to lift the health system’s performance in a number of priority areas. Three of these targets - better help for smokers to quit, more heart and diabetes checks and increased immunisation - focus on increasing interventions in primary care (note: the focus of these health targets has evolved over time). These targets aim to:
• offer brief advice and cessation support to 90% of the PHOs’ patients who smoke;
• assess the cardiovascular risk of 90% of the PHOs’ eligible populations;
• provide 95% of eight-month-olds with their primary course of immunisation.

Actions
The Ministry has developed a number of tools and resources to support PHOs to achieve the above targets. These tools and resources centre around the four tenets for changing clinical behaviour: leadership, training, systems support and audit and feedback. A subject matter expert has also been identified for each target (these experts are known as Target Champions) and in some cases financial incentives have been offered.

Achievements: The latest health target results for quarter three of 2013/14 show that:
• 71.4% of general practice patients were offered brief advice and/or support to quit smoking in the 12 months ending 31 March 2014.
• 77.6% of eligible patients had their cardiovascular risk assessed in the five years ending 31 March 2014
• 91.4% of eight-month-olds have completed their primary course of immunisation.

Conclusions
Although these health targets have not yet been achieved, significant progress has been made since they were introduced. The translation of national health priorities into the primary care environment has been challenging as PHOs operate different organisational and financial structures, use different IT systems and employ a diverse workforce. However, strong commitment from the primary care workforce and a systematic approach has helped New Zealand to achieve a level of screening and intervention that has not been replicated anywhere else in the world.

Implications
Following the success of these health targets, it is important to reflect on the lessons we have learnt and identify the extent to which these targets have improved the health of New Zealand’s population. It is possible that these successes could be replicated in other countries - Victoria, Australia is already considering a target to increase smoking cessation interventions in secondary care. It’s also possible that a targeted approach could be used in other sectors besides health, such as education or social development, to draw national attention to priority issues.
The PATU© initiative as cultural praxis: Constructing tools to appropriately evaluate health and fitness programmes developed by and for Māori.

Rachel Forrest¹, Ariana Stockdale-Frost¹, Lee-Anne Taylor¹, Sue Chapman¹, Levi Armstrong²
(schapman@eit.ac.nz)
¹Eastern Institute of Technology, Hawke’s Bay
²PATU© Hawke’s Bay

Introduction
A patu is a weapon used by Māori warriors to attack and hit their enemies and to protect their whānau. PATU© is a group exercise initiative that attacks physical inactivity and sedentary behaviours associated with obesity by weaving high intense fitness (HIT) and healthy lifestyle education, with te reo (Māori language) me ōna tikanga Māori. The 2011/12 New Zealand Health Survey (Ministry of Health, 2012a,b) highlighted persistent health inequities for New Zealand Māori. One in five Māori children (17%) and two in five Māori adults (44%) are obese. These rates are about twice as high as the rate for non-Māori children and adults respectively.

Likewise, Māori adults were found to be about 2.1 times as likely to have been diagnosed with diabetes as non-Māori. These alarming statistics identify challenges for improving Māori health such as reducing obesity rates, increasing diabetes awareness, providing relevant interventions and education, and improving access to health services especially in high deprivation communities. The need for Māori specific interventions designed to improve physical activity and energy balance in New Zealand is evident. This need was recognised by Levi Armstrong, an Eastern Institute of Technology Bachelor in Sport and Recreation graduate, who in response created the PATU© initiative in the Ngāti Kahungunu.

The PATU© programme which targets local tamariki, mums, big boys, big girls and kaumātua along with various marae, workplace and prison groups has grown rapidly since its beginnings in July 2012. PATU©’s public profile has increased both locally, within Ngāti Kahungunu with whānau and hapū realising the many benefits of this innovative approach to ‘Māori on the move’, and nationally. A recent evaluation of PATU© commissioned by Te Puni Kōkiri, (The Ministry for Māori Development) (Goodwin et al., 2014, p16) stated that “PATU© is achieving some outstanding results in terms of positive life changes for participants”. These results are extremely encouraging particularly in light of the typically low uptake and sustainability by Māori to other health interventions.

Aim
To develop new research tools aligned with Māori philosophy and cultural practice to evaluate the PATU© initiative in a way that is meaningful for Māori and provides means for future research in this area.

Method
The purpose of this research is to investigate methods to evaluate PATU© as a health initiative from a Māori perspective, acknowledging the holistic approach to wellbeing in that tinana (body/physical), hinengaro (mind/ psychological), wairua (spirituality) and whānau are critical elements of any Māori health intervention (Durie, 1998). In order to create the research outcome measures necessary to do this, PATU© participants were asked what they considered important to evaluate and how they would like PATU© to be evaluated. Ethical approval from the Health and Disability Ethics Committee was obtained for this research.

In order to capture qualitative phenomenological data from those involved with the PATU© programme, participants and trainers were invited to participate in either individual or focus group interviews. The project
was outlined verbally to potential participants and if willing to participate, written consent was obtained. Māori protocol was followed with appropriate introductions (ngā mihi) being made and a collective koha provided.

Interviews were offered in either te reo Māori or English. Two cohorts of PATU© programme participants were involved: those that attended the Orchard Road Gym in Hastings (referred to as PATU© members) and a workplace group (PATU© sessions were run within work time at the employer’s expense).

A total of 50 focus group participants and six key informants were interviewed over a two week period using the following questions to guide the semi-structured interviews:

- What things do you think would show that PATU© has been a successful programme? (tinana, hinengaro, wairua, whānau, traditional knowledge). Why?
- What things do you think we should measure (quantitative data)? (tinana, hinengaro, wairua, whānau. Why?
- What other things to you think we should get feedback from participants about (qualitative data)? (tinana, hinengaro, wairua, whānau, traditional knowledge). Why?
- What sorts of media do you think people would be most comfortable with to give us feedback about the programme? (Social media such as Facebook or Bebo, Twitter, text messaging, phone surveys, smart phone apps, paper surveys etc). Why?
- Do you think it's important to have questions translated into te reo Māori?

The interview and focus group transcripts were transcribed and subsequently analysed for themes.

**Results**

Two cohorts of data were analysed: those from a workplace (of mixed ethnicities) and those from the PATU© members (primarily Māori). The interviews reflected that all those participating in PATU© sessions were highly motivated both individually and collectively and that the participants enjoyed the PATU© sessions, especially the group approach that allowed for a range of people and abilities.

When analysing each cohort individually, it was found that the PATU© members valued PATU© for its holistic approach and that it was affordable (“Ten dollars a week...that's really cheap.”), whānau-friendly (“My whole family comes here”), non-judgemental (“It's a non-judgemental place. People don’t really care what you look like, we don't have any mirrors.”) and for fitting in with a busy lifestyle (“It fits in with the school run, the time is right.”). They also appreciated that PATU© was community based (“... heaps of whānau are coming now. PATU© has found the gap in the community.”), well connected to whānau (“... we text each other PATU© up!”) and had a strong Māori culture-base (“It's about having good Māori role models, that's my perception of it.”). The PATU© members also valued the caring attitude of the PATU© trainers (“You know the trainers, they care. They care about where you’re headed or you have a certain goals in mind, they help you get there.”).

Typical goals for attending a gym such as losing weight and improving physical appearance were not the main reasons for PATU© member attendance. Instead the PATU© gym was perceived as an ‘urban marae’; a place of community, a place people wanted to be in order to stay connected. This is reflected in the following quotes:

I just really love the atmosphere, the whanaungatanga. Whether we be here for health, or whether we come here to get fit, we do it together as a group, that’s what I love about it.
my social life is here now too. Like also, we cycle together, there’s a group of us that cycle. Plus we diet together. There’s a group of us that swim together. And then there’s a group of us that do the Iron Māori together.

The PATU© members experienced a range of outcomes which can be viewed across the four cornerstones of Māori health and wellbeing as illustrated in Durie’s 1982 model of Te Whare Tapa Whā (Durie, 1998). For example, taha tinana (body/physical) was often the reason for people joining PATU©, whereas taha wairua (spirituality), taha hinengaro (mind/psychological) and taha whānau (family/kinship) motivated the PATU© members to continue attending.

During the interviews the most mentioned aspect was taha whānau. Not only did PATU© accommodate families (“My whole family comes here; some in the morning, some in the afternoon. They love it.”), but it also created a strong sense of family among the PATU© members, which is expressed in the following quotes:

I love the environment, the whānau environment.

It’s just so encouraging, you feel comfortable, just like at home. We don’t see each other as just gym members; we see each other as whānau.

The PATU© members perceived taha wairua as a key reason for continued adherence to the programme,

“Probably the environment and the wairua, the spirit of the place. It’s inviting and keeps you wanting to come back so it’s that real whānau environment.”

The caring environment was highly valued, “I also really appreciate the aroha that everyone gives me”.

PATU© members also acknowledged several aspects of taha hinengaro as being important for their continued attendance. They found that the programme provided them with motivation (“I love PATU© ‘cause it motivates me when I can’t motivate myself.”) and it empowered them to regain balance in their lives (“I am getting the balance back, giving me the balance, it really has.”) and grow as individuals (“It has helped me heaps to grow and to be a better person really.”).

Being at PATU© was perceived as a positive place to be, “it’s that environment, again it’s about whanaungatanga. Surrounding yourself with like-minded people, positive people"

Many of the PATU© members have seen improvements in taha tinana with increased fitness (“I have seen a vast improvement in my fitness.”, “I’m so much fitter now than I was a year ago.”) and weight-loss (“I’ve lost 12kgs in four months.”, “I have lost shitloads.”). Improved physical health has enabled PATU© members to regain valued and previously lost aspects of their lives, such as,

I’m able to go back to doing those things that I use [sic] to do like diving. I want to go back to work, that’s my goal.

I gave my pig dogs away cause I was just too big. But I just got my dogs back, so I can go out hunting again.

In comparison to the PATU© members, the workplace participants valued: the convenience of workplace exercise (“I am enjoying not having a time excuse not to exercise; the break away from work.”, “I like getting out of the office.”), the teamwork (“I like the kaupapa and the closeness of the workmates together.”,
"I like the team aspect of it, it's a good break from work.") and the way in which it broke down workplace barriers ("everyone is equal in here, quite nice getting to know everyone in the business."). Again PATU© motivated its participants ("I like PATU© because I can push myself, I do more than I would if I went to the gym by myself, and I like the team building thing as a group, it's really cool.") and provided positive physical outcomes ("[it] helps me with my fitness and health"). As one member explained, "I like PATU© because it feels good and it's good fun doing it."

In exploring how PATU© participants would like to be evaluated different, their attitudes towards different data collection methods were sought. Again, responses varied dependent on the cohort interviewed. Collectively the PATU© members preferred the idea of using text (94%), Facebook (86%) and other smart phones apps (50%), for research data collection. However, older members showed a preference for phone interviews (28% of total), email (14%) and paper based surveys (19%). In comparison the workplace participants preferred smart phones apps (55%) and email (50%) followed by Facebook (35%) and texts (35%), with no one wanting to be contacted by phone and very few wanting to participate in paper surveys (5%). When asked about the use of te reo Māori the following quote captures the opinion of most:

I think for those that can speak te Reo. I personally can't speak te Reo, so I wouldn't want to see it or else I'm just going to turn away ... because I can't understand it. But for those that do understand it, who can korero. Yeah, definitely. It would be good for them because it gives them that bit of 'I can do that, I have got that'.

**Discussion**

The results from this study align well with those of the PATU© evaluation commissioned by Te Puni Kōkiri(Goodwin et al., 2014) and confirm that the most compelling feature of PATU© is whanaungatanga, the relationships that develop through shared experiences, working together, building a collective sense of belonging, and strengthening connectedness. This coupled with being distinctly Māori and having scalability, variety and inclusivity was thought to give PATU© the "x-factors" that enabled PATU© members to build well-balanced healthy lifestyles (Goodwin et al., 2014).

The PATU© positive urban marae approach is proving to build whānau capacity through a strong sense of cultural identity reflected in the iconic Māori warrior logo that is promoted as a patch worn proudly by PATU© members, creating a positive place for whānau to thrive both individually and collectively. The PATU© staff are also dedicated to creating leadership and workforce opportunities for their members. Together these aspects of PATU© help to build the supportive and nurturing environment that is empowering people to transform their lives. This has been reflected in both local and national media (e.g. Hastings man loses 100kg in 15 months, *Hawke's Bay Today*, Nov 18, 2013; Full Stretch For a Healthy Workplace, *Hawke's Bay Today*, Aug 11, 2014; PATU© Aotearoa Te Kāea: Māori Television, 20 February, 2014; PATU© Aotearoa Te Kaea: Māori Television, 30 September, 2014; Launchpad video: PATU© Aotearoa, *Element Magazine* 20 Oct, 2014).

This ultimately translates into the people wanting to attend the PATU© sessions which in turn results in positive outcomes such as increased fitness, weight-loss, mental resiliency, and strengthening of wairua, it also puts PATU© in a unique place within society whereby it can function as a culturally centric model similar to that of an urban marae. This is further cemented by the use of social networks such as Facebook, highlighted by PATU© members as the preferred pathway of communication as it allows extensive connectivity, is transparent, has collective messages, utilises pictorial images and metaphorical messages. Thus the benefits of the PATU© programme are multifaceted and this provides an ongoing evaluation challenge.
Anecdotally we noticed that kaupapa Māori research is often done for Māori, by Māori, but using traditional Westernised/Eurocentric tools such as written surveys which are individually focused. While a wealth of knowledge about PATU© has been obtained using these it was apparent that the PATU© whānau felt compelled to engage in written surveys because of PATU© loyalty, however they often required support in understanding written questions.

Cheatham et al., (2002) concluded that culturally appropriate contemporary research tools need to move away from being transcultural. For Māori, knowledge is obtained from relationships (Durie & Hermansson, 1990) and directness is shunned with there being a preference to focus on the higher-order and wider spectrums of Te Ao Māori (the Māori world) (Durie, 2007). Thus, when developing research tools to evaluate PATU©, a move to culturally centred methods is required along with the use of non-individual approaches. One method may be the use of metaphorical image based research tools. Metaphors are used in the Māori language to provide significant insight and understandings are like a door into Te Ao Māori. McLeod & McLeod (2011, p. 165) state “by accepting and valuing the use of metaphoric images, tools can be developed that are multi-culturally appropriate; whānau will be more likely to relate to, and feel less threatened when exploring an issue through pictorial images”. Regardless of method, any research tools developed to evaluate PATU© needs to be able to capture the holistic nature of the outcomes experienced by both the PATU© participants (both individually and collectively) and those connected to them. Capturing the “ripple effect” provides a significant challenge. Our research suggests that there are preferred approaches to gathering qualitative data which are cohort- and age-dependent and therefore that a variety of methods should be explored further. The PATU© whānau appears to be very “tech savvy” and so methods which involve things that are intrinsically lifestyle oriented such as Facebook or smartphone apps may be appropriate, with the ability to be delivered in both English and te reo Māori.

**Conclusion**

The PATU© initiative aligns with, and promotes, traditional Māori values such as rangatiratanga (self-responsibility for their health and wellbeing), whanaungatanga (community involvement and cultural awareness), kotahitanga (working together, teamwork), kaitiakitanga (respect for property and resources) and manaakitanga (caring and sharing in a reciprocal fashion) by incorporating atuatanga into each training session and embedding te reo o ōna tikanga Māori within the programme. In doing so PATU© has enabled its participants to experience a range of outcomes across the four cornerstones of Māori wellbeing (Te Whare Tapa Whā). In order to evaluate the effectiveness of PATU©, all of these facets of Māori health and wellbeing need to be captured.

The results of this study indicate that PATU© participants preferred technological approaches to research data collection, which are intrinsically lifestyle oriented. Moreover, findings have highlighted that there is also scope to develop non-Eurocentric approaches such as incorporating metaphorical image based tools to investigate PATU© health outcomes in future research.

**Implications**

The development of culturally appropriate contemporary research tools to evaluate the impact of Māori health initiatives, such as the PATU© initiative, are vital in the search for new knowledge to combat health inequities in New Zealand. Furthermore, it is imperative that ‘ownership’ for Māori health-related outcome-based research be conducted in collaboration with Māori for it to be meaningful and successful.

**Acknowledgements**

This research was made possible due to funding from the Health Research Council of New Zealand and the PATU© participants who were willing to share their experiences and perceptions.
References


Voice of citizens in the primary health care system of Nepal: Do citizens make complaints and are they heard?

Gagan Gurung¹, Professor Robin Gauld¹, Associate Professor Sarah Derrett¹, Professor Philip Hill ¹
(gurga376@student.otago.ac.nz)
¹Preventive and Social Medicine, University of Otago, Dunedin, New Zealand

Issue
Patient and public voice is an important aspect of health governance (Brinkerhoff, 2011). In recent decades the Government of Nepal has introduced different voice mechanisms such as health facility committees and clinic suggestion boxes into its primary health care system which comprises approximately 4000 public health facilities (Department of Health Services, 2010/11; Gurung & Tuladhar, 2013; Mehata et al., 2012). To make the health system responsive and accountable to the citizens, there is a need for effective patient complaints mechanisms (Post & Agarwal, 2011). However, little is known about how Nepali citizens make complaints to health service providers.

Aims
To explore the routes by which citizens make complaints about the health care services, and to gauge the responsiveness to complaints by health service providers.

Methods
Using a mixed methods case study design, three groups of participants (220 patients, 100 health facility committee (HFC) members and 80 service providers) were recruited from 22 of 39 public health facilities in the Dang District. Interviewer-administered structured questionnaires were used to collect quantitative data (Feb-March 2014). In addition, qualitative interviews were held with 39 key informants (HFC members-14, service providers-10, district public health office staff-4, other district and community stakeholders-11) and 6 focus groups within the community to provide more detailed and contextual information. Quantitative data was analysed using SPSS 16; qualitative interviews were transcribed and then analysed using QSR Nvivo 10.

Results
Of health facility patients, 9% reported making complaints about the health facility services. Educated and males (p<.02) were more likely to make complaints. Most complaints were made directly to health providers. None of the health facility patients and less than 2% of committee members and service providers mentioned use of suggestion boxes. More than two thirds of complainants said that they either didn’t know about the response or were dissatisfied with the response to their complaints. Complaints made were about availability and accessibility of medicines, health facility opening hours, staff behaviour and regularity. Reasons for not complaining were lack of knowledge regarding service entitlements and complaint mechanisms, fear of health workers and perceived lack of responsiveness to complaints.

Conclusion
Very few citizens made complaints to primary health care services in Nepal, and they tended to follow direct informal approaches when complaining. The responsiveness to complaints was reported as poor.

Implications
There is a need to increase awareness among citizens about service entitlements and voice mechanisms; and to increase service provider responsiveness to complaints lodged.
References


Nutrition and physical activity environments in childcare: Preliminary results from the “Kai Time in ECE” survey of Early Childhood Education services in Auckland and Waikato

Sarah Gerritsen¹, Susan Morton², Clare Wall³  
(s.gerritsen@auckland.ac.nz)  
¹PhD Candidate, School of Population Health, University of Auckland  
²Associate Professor Population Health and Director of Growing Up in New Zealand, Centre for Longitudinal Research, University of Auckland  
³Associate Professor and Head of Discipline Nutrition and Dietetics, University of Auckland

Issue  
Early Childhood Education (ECE) is an increasingly important environment in young children’s lives; over 95% of New Zealand’s three and four year olds now attend ECE, for an average of 22 hours a week each (Ministry of Education, 2013). The ECE environment has the potential to influence food preferences, eating behaviours and physical activity, not only for the immediate preschool years but also for a lifetime (Larson, Ward, Neelon, & Story, 2011), yet we have little information in New Zealand about how ECE food, nutrition and physical activity contribute to a child’s diet and body size.

Aims  
The Kai Time in ECE Survey aimed to:  
1 Assess the quality of diet and foods served to three to four year old children at ECE services  
2 Evaluate the ‘obesogenic’ nature of ECE environments (i.e. do they encourage high energy intake while promoting sedentary behaviour for children)  
3 Examine the enablers and barriers to effective health promotion in the ECE sector.

Method  
All licensed ECE services (private and community-run day care centres, kindergartens, ngā Kōhanga Reo and play centres) in the Auckland, Counties Manukau and Waikato DHB areas were invited to take part in an online survey from May to July 2014. One person, usually the manager or head teacher, from 257 different ECE services completed the survey, giving a response rate of 30%.

Results  
Provision of food: 85% of private day care centres, 58% of community day care centres, 23% of kindergartens and 19% of play centres provided some food to children every day. Lunch was provided in 38% of all ECE services (64% of private and 37% of community day care centres).

Food from home: In 47% of ECE services, children brought all food consumed during the day from home. 95% of ECE services request children to bring food from home for special occasions (e.g. birthdays, last days, celebrations). 66% have written nutritional guidelines for food brought from home. 18% of ECE services reported that ‘all’ their families complied with the guidelines.

Special occasions: 7% of ECE services had a special occasion where food was served in addition to the usual meals and snacks at least weekly, 41% monthly, and 46% a few times a year. Most common food served on special occasions was cake (83%). 49% usually served fruit or vegetables. 26% usually served three or more foods with high sugar/fat/salt content.

Nutrition education: 60% of ECE services teach nutrition concepts at least weekly and 59% involve children in making baking or cooking food at least weekly. 90% of ECE services had an edible garden and 86% involved children in gardening at least monthly.
Fundraising: 37% of ECE services had sold food for fundraising in past twelve months. Sausages, pies and pizza were the most commonly sold foods (54%), followed by cakes or biscuits (49%); 24% had sold confectionary in the past twelve months, i.e. 9% of all ECE services.

Physical activity (PA): A wide range of PA strategies, space and equipment were used by ECE services to encourage active play. Most children were reported to spend the majority of their time in active play. 87% of ECE services led children in some active play during the day. 87% reported having enough indoor space for active play; 11% reported enough indoor space for running.

Sedentary behaviour: In 11% of ECE services, children watched television/DVDs at least weekly (2% daily). 33% reported that children use computers at least weekly (11% daily).

Barriers: 40% reported their ECE service faced a barrier to providing healthy food or promoting healthy eating; the most common barrier was lack of support from parents/whānau (52%), followed by concerns about allergies (26%). 29% reported a barrier to promoting PA to children; the most common barriers were limited space (34%), limited storage (34%) and insufficient funds (30%).

More results are available online at http://www.growingup.co.nz/kai-time

Conclusions
Children begin ECE at a younger age and are attending for more hours a week than ever before, so it is crucial that ECE environments support healthy development. These preliminary survey results point to key areas of the ECE nutrition and physical activity environment that arguably would benefit from greater public health intervention; specifically, clear guidelines regarding food brought to ECE from home (both daily in lunchboxes and for special occasions) and suggestions of techniques for how teachers could respond when the guidelines are not met; ideas for fundraising activities that do not involve unhealthy foods; and guidance regarding time children spend on sedentary activities in ECE services, such as television watching.

Implications
This detailed study of ECE nutrition and physical activity environments adds to our understanding of obesogenic environments for children in New Zealand. The potential to link the Kai Time in ECE survey data with individual and home-level data collected in the Growing Up in New Zealand longitudinal study (Morton et al., 2012) makes this research unique, allowing for future exploration of the relative contribution of ECE environments (alongside home and family environments) to children’s dietary pattern and body size.

Acknowledgements
Many thanks to all the respondents of the survey and the pilot study. Thank you to everyone who shared their knowledge and gave advice on survey design and data collection, particularly ECE and health promotion sector representatives, Professor Boyd Swinburn, Dr Polly Atatao Carr, Professor Papaarangi Reid, Dr Te Kani Kingi and Dr Lana Perese. Thanks also to Moko Kumar, Brogan Harvey and Dinusha Bandara for their assistance with the data collection and analysis.

References


Ethnic inequalities in the use of statins after an Acute Coronary Syndrome in New Zealand

Corina Grey¹, Rod Jackson¹, Sue Wells¹, Andrew Kerr¹,²
(corinagrey@gmail.com)
¹Section of Epidemiology and Biostatistics, University of Auckland, Auckland, New Zealand
²Middlemore Hospital, Counties Manukau District Health Board, Auckland, New Zealand

Issue
Statins are a well-established safe and effective component of the secondary prevention of cardiovascular disease. Overseas studies have reported that statin use in people following an Acute Coronary Syndrome (Myocardial Infarction or Unstable Angina) is low, with as many as three-quarters of all patients discontinuing their medications by two years post-discharge. Few studies have assessed the maintenance of statin therapy beyond two years and fewer have examined whether statin dispensing differs among ethnic groups.

Aims
We aimed to assess patterns of statin use and predictors of poor statin maintenance, including the effect of ethnicity, over a three-year period in all people discharged from a New Zealand hospital with an Acute Coronary Syndrome.

Methods
We linked national hospitalisation, mortality and pharmaceutical dispensing data in people aged thirty-five to eighty-four years who had been discharged from hospital with an Acute Coronary Syndrome in 2007. A Medication Possession Ratio (MPR), representing the percentage of follow-up days that statins were dispensed, was calculated for each patient. Adequate statin maintenance was defined by a MPR of 80% or more.

Results
In 2007, 11,348 patients aged thirty-five to eighty-four were hospitalised for an Acute Coronary Syndrome. 10% of the cohort was Māori, 3% Pacific, 2% Indian and the remainder New Zealand European/Other. At one year post discharge, 76% of Indians and 70% of Europeans/Others were adequately maintained on statins, compared to only 58% of Māori and 57% of Pacific people. By the end of the three years of follow-up, these percentages had decreased to 71% of Indians, 68% of Europeans/Others, 55% of Māori and 54% of Pacific people. After adjusting for multiple factors, including age, gender, diagnosis and previous cardiovascular history, Māori were 12%, and Pacific people 18%, less likely to be adequately maintained on statins both one and three years following an Acute Coronary Syndrome.

Conclusions
Compared to other ethnic groups, Māori and Pacific patients were less likely to be maintained on statin medication following an Acute Coronary Syndrome.

Implications
Given that there are marked ethnic inequalities in cardiovascular health in New Zealand, it is essential that we prioritise efforts to increase the prescription and utilisation of evidence-based therapy, such as statins, in Māori and Pacific people.
The Wellbeing Game: E-mental health promotion using the five ways to wellbeing

Carston Grimm

(Carsten@mentalhealth.org.nz)

1Mental Health Foundation New Zealand

How can we improve overall mental wellbeing in the New Zealand population? The lifetime prevalence of mental illness in New Zealand is estimated to be 46.6% (Oakley Browne, Wells, & Scott, 2006). Optimal mental health (flourishing), which can act as buffer against common mental health problems, is only experienced by approximately 24% of New Zealanders (Hone, Jarden, Schofield, & Duncan, 2014). These high rates of mental illness and the relatively low rates of mental wellbeing pose a threat to New Zealand’s social and physical health and the economy. We need strategies to improve overall mental health across the population.

The wellbeing game (TWBG) is a web-based activity-logging game designed to improve wellbeing by making people more aware of things they do to support their mental health. TWBG enables participants to use The Five Ways to Wellbeing to record and reflect on their wellbeing activities in an online community. The Five Ways to Wellbeing (5WW—connect, keep learning, be active, take notice, give) are a set of evidenced-based principles meta-analysed by the New Economics Foundation (NEF) for the UK Government Foresight Project (Aked, Marks, Cordon, & Thompson, 2008).

TWBG has been run over three consecutive years during Mental Health Awareness Week (MHAW) in October and has been played nationally since 2012. The 2013 game had 1483 players (up from 994 in 2012), in 252 teams, with 157 organisations, workplaces and schools participating. Players logged a total of 32,944 wellbeing activities and 46,205 hours of wellbeing. In 2013 TWBG was evaluated using the short Warwick-Edinburgh Mental Wellbeing Survey (SWEMWBS; N = 249) administered pre-game and at follow-up after game close.

People who played at least three days experienced an average wellbeing increase of 2.1 SWEMWBS points, from 24.4 to 26.5 (maximum score of 35; p < 0.0001). People who played fewer than three days experienced a non-significant average wellbeing increase of 0.9 SWEMWBS points, from 25.2 to 26.1 (p = 0.1). Changes in wellbeing were not associated with gender, age, or ethnicity.

TWBG—a highly scalable internet based mental health initiative utilising gamification and evidence-based wellbeing promotion principles—shows promising results as a means of improving participant’s wellbeing. TWBG is also successful in increasing awareness and understanding of positive mental health at a population level. TWBG strategic future focuses on nation-wide promotion, further evaluation research, a mobile app and a tailored product for workplaces. TWBG is an example of e-mental health at the intersection of new technologies, wellbeing science, and public mental health promotion.

To play the Game visit https://www.thewellbeinggame.org.nz/

Acknowledgements

Acknowledgements go to the original architects of TWBG: Dr Jackson Green (CDHB) for the exemplary evaluation of TWBG, Chris Ambrose (CDHB) for the IT development of TWBG, Ciaran Fox of the Mental Health Foundation (MHF) for the gamification and positive wellbeing focus, and Michelle Whitaker (formerly CDHB) for the original project management of TWBG. TWBG was developed in partnership between Community and Public Health, Canterbury DHB and the Mental Health Foundation.
References


The Contribution of a Community Physical Activity Intervention for People with Mental Illness

Arno Grueber, Dr Jeffrey Gage², Dr Pauline Barnett²
(agrueber@richmond.org.nz)
¹ Richmond Services Limited
² University of Canterbury, Christchurch, New Zealand

Issue
According to the National Mental Health Survey published by the New Zealand Ministry of Health, 39.5% of the population aged 16 and over has a mental illness at one stage in their life, 20.7% within the last 12 months, with anxiety and mood disorders the most common. The survey also showed that people with mental illness have increased physical health problems (Oakley Browne, Wells & Scott, 2006). Research indicates that physical activity not only improves physical health but also reduces symptoms of depression and anxiety (Rethorst et al. 2009; Wipfli et al. 2008). However, people with mental illness are less likely to be physically active than other people (Daumit, 2005). In New Zealand several interventions are available to engage people with mental illness in physical activity. To this end, little is known about participants’ experiences with such interventions.

Aim
The aim of the study was to narrow this gap by revealing participants’ experiences with the Activity Based Experience (ABE) Programme in Christchurch. This included their perceived benefits and barriers to physical activity, contributing factors to physical activity adherence and suggestions for service improvements. Findings draw on individual semi-structured interviews with thirteen participants in the intervention. Ethical approval was granted by the Human Ethics Committee of the University of Canterbury.

Results
Qualitative findings indicate both benefits and barriers to physical activity were physical (e.g. in relation to body weight), psychological (e.g. in relation to self-esteem) and social (e.g. in relation to support). Factors affecting maintenance of physical activity included accessible community resources, being mentally well, taking personal responsibility and achieving goals. Suggestions for improvements to the service included a longer programme with more frequent sessions, using motivational methodologies (for example social media) and the potential for group activities.

Conclusion
The ABE Programme provides multi-dimensional benefits, helps participants to overcome barriers to physical exercise and positively influences health beliefs and behaviours of some participants. Similar interventions should become an integral part of mental health services provided by specialised support professionals, targeted toward early intervention and multidisciplinary collaboration. It is recommended to use evidence based physical activity adherence methodologies and tailor intervention to participants in regards to activities, duration of service and frequency of sessions. More research is needed how to understand how to diminish barriers to physical activity and maintain physical activity long-term for people with mental illness.

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References


The Gravida Healthy Start Workforce Project.

Jackie Gunn¹, Caroline Gunn¹
(j.gunn@auckland.ac.nz)
¹Gravida

Issue
A healthy eating pattern and regular exercise during the periods of pre-conception, pregnancy and post-partum influences developmental programming, and this has both short and long term health effects for mother and infant. It is therefore crucial to provide the workforce with the latest knowledge from scientific research about nutrition and physical activity in pregnancy and early life, and provide training in behaviour change skills that can support them to encourage women and families to make healthy choices. Pregnancy is a time when maternal and child health professionals have a central and trusted relationship with women and their families, with the opportunity to influence change. ‘Best practice’ public and population health strategies acknowledge that sustainable change occurs when the full spectrum of population groups, including relevant workforces, are part of the strategy.

Aims
To increase health literacy about the developmental effects of nutrition and physical activity during pregnancy and early life for health professionals providing care to women and young children. To provide tools to enable the workforce to engage in healthy conversations to support behaviour change. The Gravida Healthy Start Workforce Project is also committed to supporting a system-wide approach by partnering with a range of maternity and child health providers to ensure consistency of key messages about healthy nutrition and physical activity in pregnancy and early life.

Methods/ actions
The Healthy Start Workforce Project consists of two complementary professional development programmes:
• Healthy Conversation Skills (HCS) training – face to face workshop-style training in skills to encourage behaviour change, based on an empowerment model. HCS will strengthen health care professionals’ ability with techniques and tools that assist them to support women and families to identify barriers and plan their own solutions that fit with their culture and world view (via a train-the-trainer model).
• Healthy Start Education Programme – an e-learning based programme that will translate scientific evidence for the developmental influence of nutrition and physical activity in pregnancy and early life into relevant, practical education material that will give participants confidence in daily practice. This programme will primarily be offered online, with a limited number of face to face workshops offered.

Both programmes will be backed by an online hub for access to education modules, resources, news, the latest research, and other relevant websites and a forum to discuss and share best practice advice (http://www.healthystartworkforce.org.nz). The education programmes are being developed in collaboration with, and peer reviewed by academic, advisory and cultural groups within the New Zealand population. Both programmes will be culturally appropriate for workforces serving our high needs populations.

Intended Outcomes
For workforce participants to have increased knowledge of the concepts taught and confidence in their ability to incorporate this knowledge into their practice. Long term outcomes include: increased awareness in women and their families of the need for a healthy eating pattern and regular exercise; and subsequent improvement in the health of mothers, infants and young children in New Zealand.

Results/ achievements
The HCS programme has been shown to be a successful workforce development intervention in the UK. Both HCS and the new education programme will be formally evaluated at several key milestone points to ensure they are useful and sustainable in New Zealand.
Māori and public health: working in partnership to manage freshwater resources

Garth Harmsworth¹
(harmsworthg@landcareresearch.co.nz)
¹Te Arawa, Ngāti Tūwharetoa, Ngāti Raukawa. Landcare Research – Manaaki Whenua, Palmerston North, New Zealand

Abstract
There are complex connections between human health and wellbeing, environmental health, and environmental change. For Māori these connections can be intimate and impacting; where Māori have a close relationship and inter-dependency with natural resources, ecosystems and cultural taonga (treasure). We address four main questions: 1) what are Māori – tangata whenua (people of the land) values for freshwater? 2) What Māori concepts and models are used for understanding and assessing water quality and quantity? 3) What are Māori objectives for freshwater and how do these align with those in public health? 4) How can we work effectively in partnership to achieve agreed goals in freshwater management? We work through these questions – discussing cultural values, providing classifications and conceptual models for understanding and assessing water quality and quantity, briefly review cultural monitoring approaches being used across New Zealand, summarise Māori knowledge models for public health, and provide examples of the key steps for working in partnership to manage freshwater resources.

Introduction
The decline in water quality and quantity, and its state of mauri (life force), is a significant issue for Māori. This is typically represented in local tribal areas by widespread degradation of customary resources, including extensive habitat area reduction, low flows in rivers and streams, reduction in flora and fauna populations, and poor condition of ecosystems and resources (e.g. mahinga kai, taonga species, habitats). This paper addresses four main questions:

1. What are Māori – tangata whenua values for freshwater?
2. What Māori concepts and models are used for understanding water quality and quantity?
3. What are Māori objectives for freshwater and how do these align with those in public health?
4. How can we work effectively in partnership to achieve agreed goals in freshwater management?

Recent freshwater reforms signal an overdue reaction to widespread and increasing water quality and quantity issues in New Zealand (Ministry for the Environment 2013, 2014). The proposed Resource Management Act (RMA) reforms, through the RMA and National Policy Statement (NPS) 2014, set out a new approach and pathway to manage freshwater nationwide. These documents identified a number of priorities and core objectives, including the need for collaborative planning, effective provisions for iwi/Māori involvement in freshwater planning and decision-making, and the implementation of a national objectives framework (NOF).

Within the context of freshwater co-management and collaborative decision-making, a framework is presented to increase iwi/Māori participation in freshwater management decision-making. As part of this process, monitoring is used to measure progress towards or away from desired iwi/hapū aspirations and outcomes. Aspirations, defined through stated goals and objectives based on iwi/hapū values, are given in many planning documents such as iwi/hapū management plans, strategies, co-management agreements, and research reports.

¹Iwi meaning tribe or bone
Māori – tangata whenua values for freshwater

The Ministry of Education (2005) defined values as internalised sets of beliefs or principles of behaviour held by individuals or groups. They are expressed in the way people think and act. They are based on cultural, religious, philosophic and spiritual traditions and on current critical reflection, dialogue and debate’ (Rokeach 1973; Gilbert and Hoepper 1996; Ministry of Education 2005).

Māori values are based on the traditional Māori belief and knowledge system, which is the foundation from which Māori understand and comprehend their world. These traditional concepts and values still resonate strongly in the contemporary world. Values and knowledge, often iwi/hapū specific, are used guide resource management and decision-making. However widely used core Māori values can be summarised (Pere 1982; Marsden 1988; Barlow 1993; Henare 2001; Mead 2003; Harmsworth et al. 2013).

<table>
<thead>
<tr>
<th>Māori - tangata whenua values</th>
<th>Description and meaning (and application to health)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whakapapa</td>
<td>Ancestral lineage, genealogical connections, relationships, interconnection to all ecosystems, basis for genetic assemblage. The bonds of interconnection to the natural environment are preserved in traditions.</td>
</tr>
<tr>
<td>Tikanga</td>
<td>Customary practice, cultural values, customs, protocols, the right way or correct way to do something, basis for principles.</td>
</tr>
<tr>
<td>Rangatiratanga</td>
<td>Cheftainship, embraces the spiritual link Māori have with Papatūānuku (earth mother), encompasses drives for self-determination, sovereignty.</td>
</tr>
<tr>
<td>Mana whenua</td>
<td>Authority and status over land and water resources derived from whakapapa and continued occupation.</td>
</tr>
<tr>
<td>Kaitiakitanga</td>
<td>Links to rangatiratanga and mana, loosely translated to environmental guardianship, acts to protect and enhance the natural environment.</td>
</tr>
<tr>
<td>Ora, Oranga</td>
<td>Health and wellbeing.</td>
</tr>
<tr>
<td>Whānau ora</td>
<td>Links to ora and whānaungatanga. The health of the natural environment is paramount for human well-being. To restore and maintain the health of one is to restore and maintain the health of all.</td>
</tr>
<tr>
<td>Arohatantra</td>
<td>The notion of care, respect, love, compassion.</td>
</tr>
<tr>
<td>Whānaungatanga</td>
<td>Building and maintaining relationships, family connections, to ensure future sustainability of resources and human wellbeing.</td>
</tr>
<tr>
<td>Manaakitanga</td>
<td>Acts of giving and caring for, nurturing the natural environment, to provide resources for human wellbeing and mane through acts such as hospitality.</td>
</tr>
<tr>
<td>Whakakotahitanga</td>
<td>Unified, reaching consensus by working together, for individual differences and participatory inclusion for decision-making.</td>
</tr>
<tr>
<td>Wairuatanga</td>
<td>The spiritual dimension, the health of the natural environment or system is paramount to human physical and spiritual well-being. If the mauri or life force of our natural environment it strong, then the people are strong.</td>
</tr>
</tbody>
</table>

Mātauranga Māori (Māori knowledge) and values provide the basis for the development of Māori frameworks and models, and underlie and guide kaupapa Māori assessment, evaluation, decision-making, and natural resource management (Buck 1950; Pere 1982; Henare 1988; Awatere and Harmsworth 2014). Māori values can be expressed in the physical environment in tangible geographic locations and in flora, fauna and associated habitats (Harmsworth 1997, 1998). These may include, e.g.:

- Wāhi tapu – traditionally referred to sites or places of ritual constraint or prohibition, and is defined as “a place sacred to Māori in the traditional, spiritual, religious, or mythological sense” and generally used to acknowledge sacred sites; Includes urupā – burial sites

- Wāhi tupuna or wāhi taonga – can include ancestral sites, sites of significance, including historic pā sites, tracks (ara), kāinga (settlements), marae, rock carvings, mahinga kai, cave areas, archaeological sites, tohu (features, marks), traditional occupation sites, rock formations, significant stands of forest or trees, etc.
• Mahinga kai – areas, habitats, and locations where food of any sort is gathered, grown or hunted, including forests, wetlands or swamps, lakes, rivers, cultivatable soils, etc.

• Taonga – Can be whole systems such as groundwater and rivers, or culturally significant species, such as fish, animals, birds, plants, etc. (e.g. Tuna, koura, kōaro, kanakana, kākahi, kererū, tī kōuka, kuta, raupō, harakeke, pingao, kiekie, pipi).

Māori concepts and models used for water quality and quantity
Traditionally Māori acknowledged a natural order to the universe, a dynamic system built around the living and the non-living. Any shift in a system, for example through human interactions and/or impacts, cause shifts in the mauri of immediately related components. As a result, the whole system eventually becomes affected and degraded. All activities and relationships are bound up and governed by principles and ethics and regulated by an elaborate system of tikanga, ritenga or rules. The process is still used by Māori to guide resource use and management. Therefore, a key outcome for kaitiakitanga is to restore balance back the whole system, to maintain or restore the mauri, and to ensure balance is maintained between people and the natural and spiritual worlds.

Māori environmental concepts are holistic. From a knowledge and management point of view in natural resource management they seek to understand and integrate the whole system, landscape or catchment. In terms of achieving Māori objectives the holistic approach is used to identify where a problem originates, how it affects other parts of the system or catchment, and then helps develop solutions based on this knowledge of connections and cumulative effects. If the mauri is defiled or weakened, it is necessary to identify the source of the problem, define the stress or pressure placed on the system, and then work to remedy or remove that problem to some degree, in line with a certain amount of pragmatism. Core Māori environmental concepts used in freshwater management:

• Whakapapa – The connection, lineage, or genealogy between humans and ecosystems and all flora and fauna. Māori seek to understand all, not just part, of the environment or system, its connections through whakapapa (genealogy). Their perspective today is very holistic and integrated;

• Mauri – an internal energy or life force derived from whakapapa, an essential essence or element sustaining all forms of life. Mauri provides life and energy to all living things, and is the binding force that links the physical to the spiritual worlds (e.g. wairua). It denotes a health and spirit that permeate all living and non-living things. All plants, animals, water, and soil possess mauri. Damage or contamination to the environment is therefore damage to or loss of mauri;

• Kaitiakitanga – the exercise of kaitiakitanga represents responsibilities and obligations (Marsden and Henare 1992; Roberts et al. 1995; Kawharu 2000; Atawere et al. 2013), and reinforces the mauri and spiritual attachment to the natural environment and its resources. Kaitiakitanga – sustainable resource management, an active rather passive relationship with the natural environment. It entails an active exercise of power in a manner beneficial to the resource. Kaitiaki who practice kaitiakitanga do so because they hold authority, that is, they have the mana (authority) to be kaitiaki. Kaitiaki are the interface between the secular and spiritual worlds, as the mana for kaitiaki is derived from mana whenua (the ability of natural resources to produce tangible benefits based on the rights of a group or individual to manage those resources). Hence kaitiakitanga is inextricably linked to rangatiratanga (authority, inherent sovereignty, autonomy);
• Mana – having authority or control over the management of natural resources

• Ki uta ki tai – a whole-of-landscape approach, understanding and managing inter-connected resources and ecosystems from the mountains to the sea (the Māori concept of integrated catchment management);

• Taonga tuku iho – intergenerational protection of highly valued taonga passed on from one generation to the next in a caring and respectful manner;

• Te Ao Tūroa – concept of protecting and maintaining the whole natural environment and its resources through generations, intergenerational concept of resource sustainability

• Ritenga – the area of customs, protocols, laws that regulate actions and behaviours related to the physical environment and people. Ritenga includes concepts such as tapu, rāhui, and noa, which were practical rules to sustain the wellbeing of people, communities and natural resources. Everything was balanced between regulated and de-regulated states where tapu was sacred, rāhui was restricted and noa was relaxed access or unrestricted;

• Wairua, Wairuatanga – the spiritual dimension, a spiritual energy and dimension as a concept for Māori wellbeing.

Water has been classified into many component parts and locations depending on use and values associated with bodies of water (Douglas 1984; Harmsworth 2002; Harmsworth et al. 2002; Awatere and Harmsworth 2014; Table 1).
**Table 1: Classification of water and its connection to mauri (from iwi/hapū groups)**

<table>
<thead>
<tr>
<th>Māori - tangata whenua values</th>
<th>Description and meaning (and application to health)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wai ora</td>
<td>The purest form of water, such as rain-water, it is the spiritual and physical expression of Ranginui's (sky father) long desire to be re-united with Papatūānuku. Pure water is termed &quot;te waiora a tane&quot; and to Māori it contains the source of life and well-being. Contact with Papatūānuku gives it the purity as water for human consumption for ritual. Traditional water could only remain pure without being mixed and was protected by ritual prayer. Traditionally waiora had the potential to give life, sustain well-being, and counteract evil.</td>
</tr>
<tr>
<td>Waitohi</td>
<td>Areas of pure water.</td>
</tr>
<tr>
<td>Wai puna</td>
<td>Spring water.</td>
</tr>
<tr>
<td>Waimāori</td>
<td>Freshwater water, water for normal consumption - water becomes waimāori when it comes into unprotected contact with human beings (e.g., running streams, lakes). It therefore becomes normal, usual, or ordinary and no longer has any particularly sacred associations. Waimāori is often used to describe water that is running, unrestrained, or to describe water that is clear a lucid. Waimāori has a mauri (which is generally benevolent) and was controlled by ritual.</td>
</tr>
<tr>
<td>Waiwera</td>
<td>Hot water used for healing purposes, bathing, recreation</td>
</tr>
<tr>
<td>Waipuna</td>
<td>Generally pure spring water that comes from the ground (e.g., hillside or underground springs).</td>
</tr>
<tr>
<td>Waitapu</td>
<td>Sacred waters used in rituals. Rituals used running water, sometimes termed wai matua o Taupapa (virgin water as it flows from the earth) Water was applied using certain plants, not human-made vessels.</td>
</tr>
<tr>
<td>Wai whakaika</td>
<td>Ritual waters, pools, ceremonial.</td>
</tr>
<tr>
<td>Wai whakaheketūpāpaju</td>
<td>Water burial sites.</td>
</tr>
<tr>
<td>Wei kino</td>
<td>Literally means bad or impure water (e.g., stagnant pools). Often associated with past events, polluted or contaminated water. Includes water that is dangerous, such as rapids.</td>
</tr>
<tr>
<td>Wai mate</td>
<td>Water has lost mauri, degraded, and is no longer life. Mate is that associated with death, and waimate may have been used in plea of contamination and tapu (sacred/restricted access), historic battles, dead, damaged or polluted water, where water has lost the power to rejuvenate itself or other living things. Waimate, like waikino, has the potential to cause ill fortune, contamination or distress to the mauri of other thing things or spiritual things including people, their kaimoana (seafood) or their agriculture. The subtle difference between waikino and waimate seem to be based on a continued existence of mauri (albeit damaged) in the former, its total loss in the latter. Waimate also has geographical meaning: to denote sluggish water, a backwater to a mainstream or tidal area, but in this sense the waimate retain its mauri.</td>
</tr>
<tr>
<td>Waimātaitai</td>
<td>Seawater, saltwater, the surf or the tide - used to describe any water that is tidal, influenced or related to the sea (the domain of tangaroa6) and includes waves, surf, estuaries, tidal channels, river mouths (e.g., salt water). It is used to distinguish sea water from fresh water (waimāori, waiora). Waitai was water that was returned to tangaroa. Māori often thought in cycles and processes of generation, degradation, and rejuvenation. It had uses for seafood (kaimoana), bathing and healing.</td>
</tr>
<tr>
<td>Waimātaitai</td>
<td>Significant estuarine or brackish waters.</td>
</tr>
</tbody>
</table>

**Cultural monitoring**

Guidelines for freshwater quality in New Zealand are generally assessed using metrics of physico-chemical and biological variables. Consequently, the setting of goals for a water body will commonly ask questions like what are acceptable limits for nitrogen, phosphorus, turbidity, sediment, algal growth, periphyton, invasive pests, etc. Several sophisticated cultural monitoring and assessment methods and tools based on a blend of mātauranga Māori, traditional concepts, and western science have been developed and continually being adapted and modified for local use (TUOH 2012; Harmsworth et al. 2013; Awatere and Harmsworth 2014). They can therefore be used to reinforce inter-connections between human values and the environment, identify human induced pressures and impacts, and assess the nature of change, in natural, modified, and built environments. Common cultural assessment methods and tools include:
• the Cultural Health Index (CHI) (Tipa 1999; Tipa & Teirney 2003a,b, 2006a,b; Townsend et al. 2004; Harmsworth et al. 2011);
• Adaptation of the Cultural Health Index (CHI) by Tiakina te Taiao for their own use and application Te Tau Ihu (Young et al. 2002, Harmsworth et al. 2011);
• CHI for estuarine environments – Tiakina Te Taiao (Walker 2009)
• State of Takiwā “toolbox” iwi environmental monitoring and reporting tool Te Waipounamu/South Island – Ngai Tahu (Mattingley & Pauling 2005; TRONT 2007; Pauling et al. 2007);
• Cultural indicators of wetlands (Harmsworth 2002);
• the Mauri Assessment model (Morgan, 2003, 2006a,b; 2007);
• Significance assessment method for tangata whenua river values – Te Waipounamu/South Island (Tipa 2010)
• Mauri of Waterways Kete and Framework (Jefferies and Kennedy 2009)
• Kaitiaki tools: an internet-based Iwi Resource Management Planning Tool (NIWA website)
• Ngā Waihotanga Iho: Iwi Estuarine Monitoring Toolkit (NIWA website)

Cultural monitoring tools can be used to contribute to, or inform, some formalised assessment (qualitative or quantitative) or statement of cultural values through time and space, especially to assess water quality standards and show trends.

Table 2 shows the relationship between tangata whenua values, monitoring, and provides some examples of management variables that are required collectively to meet iwi/hapū goals and aspirations.

**Table 2: Cultural monitoring to assess freshwater limits to maintain/enhance cultural values**

<table>
<thead>
<tr>
<th>Values</th>
<th>Objectives</th>
<th>Performance measures/tools</th>
<th>Management variables (examples)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaitiakitanga</td>
<td>Set limits to restore the mauri of freshwater, cultural resources, mahinga kai areas (define standards/limits/above bottom lines to support life supporting capacity/ecological integrity for taonga spp and habitats)</td>
<td>Monitoring such as CHI and mauri assessment - identify change/trends in the state or mauri</td>
<td>Minimum flows</td>
</tr>
<tr>
<td>Mauri</td>
<td></td>
<td>Abundane condition of cultural resources. taonga spp., mahinga kai</td>
<td>Nutrient management/reduction</td>
</tr>
<tr>
<td>Mahinga kai (food gathering place)</td>
<td></td>
<td></td>
<td>Water clarity &amp; sediment</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Habitat extent and condition</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Connectivity</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Pathogens (e.g., E coli)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Stock exclusion</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Catchment management -landuse</td>
</tr>
</tbody>
</table>
Māori objectives for freshwater aligned to public health

Māori objectives include, for example, improved drinking water standards, goals and standards for water quality, sustaining or restoring the mauri of water resources, healthy waterways, protection and maintenance of cultural resources, connected and healthy communities, and participation in freshwater management.

Therefore a principal outcome for Māori, to achieve these stated objectives, is an active and inclusive role in the management of freshwater (Harmsworth et al. 2013). Freshwater includes all water resource systems both groundwater and surface water. As part of more inclusive management many issues need to be addressed including governance, resource ownership and indigenous rights. Many models for co-governance, co-management and co-planning are emerging around the country. In the context of public health, many Māori goals and objectives are formulated to maintain and enhance cultural values and human health and wellbeing. Implications for public health

Environmental change, depletion and degradation of natural ecosystems (Harmsworth and Awatere 2013) and resources around the world continue to accelerate, especially under exploitative unsustainable approaches. These changes for Māori, often signify deleterious changes to cultural values, such as: destruction or loss of ecosystems/habitat/taonga, destruction of wahi tapu (sacred site), threat to mauri (life force), declining natural capital and resources, and contamination or pollution of cultural sites through various management activities (e.g. changes in land-use, pollution, nutrients, development, effluent disposal). Because Māori values are inextricably linked to the physical environment, depletion and degradation of ecosystems and resources through environmental change can be detrimental to human health and wellbeing (Durie 1994). For Māori these connections are intimate and impacting, especially where Māori have a close relationship and interdependency with natural resources, ecosystems, cultural taonga and freshwater.

Māori concepts of health

In the late 20th century many Māori believed the non-Māori health focus was too narrow and singular (i.e. concentrated too much on just physical illness) to meet their needs and did not reflect their traditional knowledge systems and values, and their holistic understanding of health and wellbeing. Numerous studies defined wellbeing holistically to encompass cultural identity, social relationships, health, and the relationship of individuals with their environment (Durie 1994). Māori consider the environment fundamental to their wellbeing as their cultural values and the environment are inextricably linked. Finding a balance between the physical, spiritual, mental, and family dimensions of individuals was stated as the key to ensure optimum wellbeing.

Conceptual models of health and wellbeing

As a part of a renaissance in Māori culture, education, and politics in New Zealand in the 1970s, a number of holistic models of wellbeing and human health were proposed, all emphasising the need to better balance traditional belief systems and cultural values with Western approaches to health (Durie 1994). All models link wellbeing to culture, cultural values and the retention of a secure identity (Durie 1994, 1998). They were particularly useful linking Māori wellbeing to the natural environment, as they demonstrated Māori relationships and a dependency on environmental conditions (Harmsworth and Awatere 2013). There are many variations of these models and concepts, but most stress a set of principles and practices to achieve a goal of mauri maintenance and human wellbeing (Durie 1994). Models used to conceptualise the components of Māori wellbeing commonly emphasise the interactions and balance through four dimensions of reality:
• taha tinana – a material state or dimension, the body
• taha hinengaro – a mental state or dimension
• taha wairua – a spiritual state or dimension
• taha whanaungatanga – family, a related or associative state or dimension.

Taha wairua is generally felt by Māori to be the most essential requirement for health. As Durie (1994) explains: “It implies capacity to have faith and be able to understand the links between the human situation and the environment”, “Without a spiritual awareness and a mauri (spirit and vitality) an individual cannot be healthy and is more prone to illness and misfortune”, “Belief in god is one reflection of wairua, but it is also strongly evident in relationships with the environment”, “Land, lakes, mountains, reefs all have a spiritual significance quite apart from economic and agricultural considerations, and are regularly commemorated in song, tribal history, and formal oratory”.

Further in terms of links to the natural environment: “A lack of access to tribal lands or territories is regarded by tribal elders as a sure sign of poor health since the natural environment is considered integral to identity and fundamental to a sense of wellbeing” (p. 71 Durie 1994). “The natural world of the Māori was not divided into seen and unseen parts, but the physical and spiritual dimensions formed an integral and indivisible entity” (Waitangi Tribunal 1985, section 6.3).

Variations of these concepts are now widely used in Māori health practice (Ministry of Health, 2014) and increasingly in resource management. Not only do these main planes of reality or states help Māori understand the natural environment in a very holistic sense, they also provide a balanced perspective of the world. These health perspectives were in accord with traditional and contemporary Māori thinking, especially in their advocacy of greater integration and (w)holism.

Three models (Table 3) became widely accepted and have since formed the basis for modern health programmes for Māori and non-Māori in New Zealand:

**Table 3: Three common Māori well-being models (Durie 1994)**

<table>
<thead>
<tr>
<th>Components</th>
<th>Whare Tapa Whā</th>
<th>Te Wheke</th>
<th>Ngā Pou Mana</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Wairua</td>
<td>Wairuatanga</td>
<td>Whānaungatanga</td>
</tr>
<tr>
<td></td>
<td>Hinengaro</td>
<td>Hinengaro</td>
<td>Taonga tuku iho</td>
</tr>
<tr>
<td></td>
<td>Tinana</td>
<td>Tinana</td>
<td>Te Ao Tūroa</td>
</tr>
<tr>
<td></td>
<td>Whānau</td>
<td>Whānaungatanga</td>
<td>Turangawaewae</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Features</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Spirituality</td>
<td>Spirituality</td>
<td>Family</td>
</tr>
<tr>
<td></td>
<td>Mental health</td>
<td>Mental health</td>
<td>Cultural heritage</td>
</tr>
<tr>
<td></td>
<td>Physical</td>
<td>Physical</td>
<td>Environment</td>
</tr>
<tr>
<td></td>
<td>Family</td>
<td>Family</td>
<td>Land base</td>
</tr>
<tr>
<td></td>
<td>Uniqueness</td>
<td>Uniqueness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vitality</td>
<td>Vitality</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cultural heritage</td>
<td>Cultural heritage</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Emotions</td>
<td>Emotions</td>
<td></td>
</tr>
</tbody>
</table>

| Symbolism      | A strong house | The octopus    | Supporting structures |
The Whare Tapa Whā model compared health to the four walls of a house, all four necessary to ensure symmetry and balance, and each representing a different dimension: taha tinana (the physical side, the body), taha wairua, taha hinengaro (the mental – thoughts and feelings), and taha whānau. To treat the whole person and achieve wellbeing all four dimensions must be in balance.

The Wheke (eight-legged octopus) model extended these four dimensions to eight, adding mana ake (the unique qualities of each individual and family, to create positive identity), mauri, hā a koro mā, a kui mā (breath of life from ancestors), and whatumanawa (the open and healthy expression of emotion). The collective waiora - the total wellbeing for the individual and family - is gained from a combination of these dimensions, and is represented in the model as the eyes of the octopus.

The Ngā Pou mana (four supports) model described a full set of values and beliefs as pre-requisites for health and wellbeing (Henare 1988; Durie 1994). The model placed greater emphasis on the external environment and the significance of oral tradition. Again with four key supports, the interacting variables for both individual and group wellbeing included whanaungatanga, taonga tuku iho (cultural heritage), te ao tūroa and tūrangawaewae (the land base, a place of belonging, standing and identity).

The Ngā Pou model also emphasises that wellbeing is affected not just by access to or quantity of natural resources but also by their state or condition. Therefore the loss of land, pollution (through sewage effluent and other contaminants) affecting traditional areas of food gathering, and the depletion of natural resources are all destabilising factors on health and wellbeing, and debase spiritual and cultural values. Particular reference to the natural environment (Te Ao Tūroa) was made by a large number of Treaty of Waitangi claims (e.g. Waitangi Tribunal 2011), especially the series of 1980 landmark decisions responding to the pollution and modification of culturally significant waterways. All these claims recognised the significance of a clean environment for good health.

**Links between Māori wellbeing and the environment**

Knowledge and conceptual health models are represented in Figure 1 & 2 conveying the Māori view of the relationships and connections between the natural environment and human health and wellbeing.

**Figure 1: Links between human health wellbeing and the environment/ ecosystems using the concepts of wairua, tinana, hinengaro, and whanaungatanga.**
Māori aspirations
In 2000 a Millennium Declaration was adopted by 189 countries. Following this declaration eight global goals were defined by the United Nations in 2005: end of poverty and hunger, universal education, gender equality, child health, maternal health, combat HIV/AIDS, environmental sustainability, and global partnership. Following the 2000 declaration the United Nations led Millennium Ecosystem Assessment was carried out between 2001 and 2005 (Millennium Ecosystem Assessment 2005a,b) to assess the consequences of ecosystem change on human wellbeing. The reports (Millennium Ecosystem Assessment 2005a,b) linked the Millennium Development goals to ecosystem services, such as: health, natural hazard protection, adaptation to climate change, freshwater provision, environmental conservation, food production, poverty reduction, and energy security. It made strong links between human wellbeing and ecosystems (Millennium Ecosystem Assessment 2005a,b; World Resource Institute 2008).

Māori have stated their development aspirations at various hui, fora and in reports (Durie 1998, 2003). These have been universally and regularly considered and debated at national, regional, tribal, and local hui (e.g. Hui Taumata – the Māori economic development summit, 1984, 2005). Some aspirations were generic, such as wellbeing and wealth creation. Many made reference to Māori self-determination and the advancement of Māori people, as Māori, and the protection of the environment for future generations. The modern concept of Māori development stresses notions of economic self-sufficiency, social equity, cultural affirmation, and a greater measure of Māori autonomy (Durie 2003, Hui Taumata 2005).

Working in partnership
The Māori world view places value on the whole environment (natural, modified, urban) using concepts and values such as kaitiakitanga to guide the management of resources (Marsden 1998; Marsden and Henare 1992; Roberts et al. 1995; Kawharu 2000; Awatere et al. 2013). A good outcome produces ongoing respect and application of Māori values and knowledge in all natural resource management decision-making, where Māori knowledge systems sit equally alongside Western science to manage natural resources such as freshwater. Harmsworth et al. (2013) identified six key steps as a process and model to underpin collaboration and co-planning with iwi/hapū in freshwater management (Figure 3). A seventh step, ‘Whakamāramatia ngā Ritenga’, was developed in 2014 (Awatere and Harmsworth 2014) to guide the development of water quality standards (e.g. setting of limits or bottom lines) required to sustain and enhance cultural values, such as mahinga kai:
• Mana Whakahaere: A Treaty-based planning framework is used for engagement and policy development
• Whakamāramatia ngā Pou Herenga: Tāngata whenua values or Māori Values (Physical to Metaphysical) are defined and reflected in engagement processes e.g. Whakapapa, Rangatiratanga, Kaitiakitanga, Manaakitanga, Mauri, Mahinga Kai, etc.
• Whakamāramatia ngā Huānga: Shared Outcomes are defined at the beginning of the engagement process
• Whakamāramatia ngā Uaratanga: Goals and objectives are established
• Whakamāramatia ngā Mahinga: Actions on the ground that demonstrate kaitiakitanga and progress iwi/hapū towards their goals/objectives/aspirations through tangible projects
• Whakamāramatia ngā Aroturukitanga: Implement a monitoring programme
• Whakamāramatia ngā Ritenga: Using the generic tikanga-based framework for setting limits for cultural values, such as mahinga kai

The framework model as a process commences with recognition of Treaty principles as a basis for engagement and respect to achieve effective participation in decision-making. The seven steps include process for identifying core Māori/tangata whenua values and principles, issues, desired outcomes, goals and objectives, and actions such as setting limits for the management of iwi/hapū values in freshwater ecosystems. Monitoring is one part of the framework to measure progress towards or away from goals and objectives.

**Conclusions**
Various holistic concepts, models and knowledge can be used to describe the complex connections between human health and wellbeing, environmental health, and environmental change. For Māori these connections can be intimate where Māori have a close relationship and interdependency with natural resources, ecosystems and cultural taonga.

The intent of this paper is to provide a basic understanding of the Māori perspective that links the health of the environment to the health and wellbeing of people. We have addressed four main questions in this paper:
1) what are Māori – Tangata Whenua values for freshwater? 2) What Māori concepts and models are used for understanding water quality and quantity? 3) What are Māori objectives for freshwater and how do these align with those in public health? 4) How can we work effectively in partnership to achieve agreed goals in freshwater management?

An understanding of Māori knowledge and perspectives (epistemology) and cultural values provides the basis for most frameworks, methods, and models to enable an understanding of Māori issues surrounding freshwater management, the desired or expected Māori outcomes and goals, the objectives, and requirements for effective participation and engagement for more inclusive decision-making. The framework model and process steps presented in this paper are intended to help increase iwi/hapū participation in the management of freshwater resources. Within these frameworks we have discussed some of the existing and emerging methods for assessing and monitoring water quality and quantity to protect and sustain cultural values.

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Housing and health of tamariki in Te Tai Tokerau: A pilot study in Whangarei hospital

Penny Hollings¹, Dr Clair Mills², Ngaire Rae¹
(mihais@maniapho.co.nz)
¹ Manaia Health PHO, Whangarei, New Zealand
² Northland DHB, Whangarei, New Zealand

Introduction
Housing and household crowding are important determinants of health (Howden-Chapman, 2007). New Zealand research has identified exposure to poor housing and household crowding as important risk factors for many potentially avoidable diseases, such as close contact infectious diseases and rheumatic fever (Baker, McDonald, Zhang and Howden Chapman, 2013; Denning-Kemp, Abdulhamid, Alabtain, 2012). Inadequate housing in New Zealand is highly patterned by age, ethnicity and socioeconomic status (Statistics New Zealand, 2003). Exposure to household crowding is unequally distributed, with the highest levels of crowding experienced by children, Māori, Pacific and lower socioeconomic populations (Baker, McDonald, Zhang and Howden Chapman, 2013; Denning-Kemp, Abdulhamid, Alabtain, 2012).

2006 New Zealand Census data (Statistics New Zealand, 2003) showed that the proportion of tamariki Māori in Northland living in crowded housing was more than 20% higher than European children. Hospital admission rates for infectious and respiratory diseases in Māori children in Northland are significantly higher than for other ethnicities within Northland, and national rates. Māori infants (<1 year) are disproportionately affected by these diseases (Craig, Dell, Reddington, 2012). Measures of structural crowding may also underestimate the extent of “true” crowding, especially in low income households affected by fuel poverty (Baker, Howden-Chapman, 2012). Functional crowding, where family members share beds or sleep in one room to keep warm, potentially adds to the risk of infectious disease transmission.

Study aims
There were four main aims of this pilot survey:

- To assess the levels of household crowding and detrimental housing conditions experienced by children admitted to the paediatric ward (Ward two) at Whangarei Hospital
- To support the development of a pathway for identification and referral of children/whānau living in crowded situations
- To check the suitability/relevance of questions that could potentially be incorporated in routine admission history taking, in order to identify children living in crowded household
- To provide current local information to assist in advocating for improved housing for whānau and more generally, improved housing across the region.

Study methods
A short questionnaire was developed based on housing related questions adapted from the 2013 Wellington Hospital Paediatric Ward ‘Student Public Health Project’ (Craig, Dell, Reddington, 2012). This questionnaire and pilot study outline were reviewed by Northland DHB Te Poutokomanawa Māori Health Directorate team leader, and approved by the Northland DHB locality ethics committee.

¹Canadian National Occupancy Standard: The Canadian National Occupancy Standard (CNOS), developed in Canada in the 1980s, is a measure of structural crowding. It calculates appropriate person-to-bedroom ratios for households of differing sizes and compositions. It makes judgements on appropriate age limits for bedroom sharing (e.g. using the CNOS, children aged less than 5 years of different sexes may share a room, while those aged 5–17 years may only share a room if they are of the same sex). The CNOS compares the number of bedrooms in a household with its bedroom requirements based on the age, sex, marital status and relationship of household members to one another. Households are reported as having two plus, one or no bedrooms spare, or as requiring an additional one, or two plus bedrooms. Households needing one or two plus additional bedrooms are deemed to be crowded.
The interviews were conducted over eight visits to the ward between September 2 and 25, 2013. Participants were a cross-section of parents/guardians of children admitted to the paediatric ward (excluding the acute assessment unit) in this period. Selection was based on the interviewer’s accessibility to patients at the time of ward visits. Interviews were conducted when it was considered it would not inconvenience patients or whānau. Families who were sleeping, who were involved in medical procedures or where a child was requiring their parents’ full attention were not approached.

Participants were given a verbal description of the study and consent details, and were then given a written copy of the same information to read and sign if they were happy to participate. All those approached completed the interviews. The interviewer read the questions out to the participants and noted their responses by hand as they talked. Once all interviews were completed the results were entered by the interviewer into the ‘Epiinfo 7’ software programme for analysis.

Findings

Forty interviews with whānau of children admitted to the paediatric ward were completed during the study period. 27/40 (67.5%) children were identified by their parents as being of Māori ethnicity. Sixteen children were aged under 12 months, nine were aged between 12 months and 5 years and fifteen were 6 years or older. In comparison with all admissions to the paediatric ward in September, and for 2013 as a whole (data not shown), the study had a slightly higher proportion of participants who were younger (<5 years) and of Māori ethnicity. Children under 12 months in the study were more likely to be Māori. 13/16 (81.25%) of whānau interviewed with a pepe (infant) under 12 months identified as Māori.

Figure 1: Study participants by age and ethnicity

![Graph showing distribution of study participants by age and ethnicity](image)

Just under half (19/40, 47.5%) families lived in homes owned by whānau/family, thirteen (32.5%) lived in private rentals and eight (20%) were Housing New Zealand (HNZ) tenants. Thirty six usually stayed in one house and four stayed mostly in one house of two. Thirty seven lived in a “stand alone” home, two a residence joined to another and one in a moveable residence. Structural crowding was present in seven (18%) of the homes of the whānau interviewed (Table 1). In all of these seven homes the children were under 5 years old and all identified as Māori (26% of Māori whānau). Four of these crowded households were HNZ properties.

Table 1: Crowding Index: Bedrooms Needed Compared to Actual Bedrooms

<table>
<thead>
<tr>
<th>Bedrooms needed</th>
<th>2 rooms</th>
<th>3 rooms</th>
<th>4 rooms</th>
<th>5 rooms</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>2 rooms</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>3 rooms</td>
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<td>11</td>
<td>6</td>
<td>3</td>
<td>20</td>
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<tr>
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<td>0</td>
<td>8</td>
<td>1</td>
<td>1</td>
<td>8</td>
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<tr>
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<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
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<tr>
<td>Total</td>
<td>5</td>
<td>22</td>
<td>9</td>
<td>4</td>
<td>40</td>
</tr>
</tbody>
</table>
Eight (20%) whānau said their child regularly shared his/her bed with others. Thirty-two (80%) did not bed share regularly. Twenty-eight (70%) whānau identified dampness, mould or mildew on walls, ceilings or floors in the bedroom or living areas of their house. Of these, fourteen said always; four, often; and ten, sometimes that this was present. Eighteen whānau identified that a child's bedroom was damp and fifteen said they had a damp living area. Half (twenty) had a damp bathroom. Mould was present in fourteen of the adult's bedrooms, nine children's bedrooms and ten living areas. Seventeen houses had mould present in the bathroom. The graph below illustrates the experience of dampness, mould or mildew, according to housing tenure. Six out of eight families living in HNZ homes always experienced dampness or mould or mildew in their home.

**Figure 2: Experience of dampness, mould and mildew by housing tenure**

Fifteen whānau said their child's usual home was always colder than they would like during the winter months; three said their home was often colder and ten sometimes colder than they would like. Two families with non-Māori children (15% of non-Māori) said their house was always or often colder than they would like, whereas sixteen whānau with tamariki Māori (59% of Māori) said this was the case. All eight of the families in HNZ properties (including the four who were crowded) said their homes were colder than they would like in the winter months. Twelve (30%) families said temperature was not an issue. Five families with non-Māori children (38% of non-Māori) lived in a house that was always or often damp and/or mouldy. Thirteen whānau with tamariki Māori (48% of Māori whānau) lived in a house that was always or often damp and/or mouldy. Six of the eight HNZ tenants said the house was always damp.

**Figure 3: Experience of a cold home during the winter months by housing tenure**

Whānau were asked if during the winter months they or their children changed rooms to sleep in the same room as others just to keep warm. The majority did not change rooms (24/40, 60%); however ten (25%) changed rooms always or often and four (10%) did so sometimes. If whānau did change rooms to keep warm, most said they moved the whole family into the lounge/living room.
Figure 4: Whānau who change rooms to keep warm in winter

Total crowding (i.e., adding together those families that were functionally crowded (sharing rooms always or often to keep warm) with the structurally crowded households) was experienced by 16/40 (40%) of all families and 16/27 (59%) of Māori whānau over the winter months. One whānau was both structurally crowded and changed rooms always to keep warm. All HNZ homes experienced either structural or functional crowding.

Nine respondents stated they did not use any form of heating in their home, but only one of these whānau also described their house as ‘warm enough’ during the winter months. Seven (26% of Māori whānau) and two non-Māori families used no heating (one of these stated their house was not colder than wanted). Five of the eight (62.5%) HNZ tenants said they could not afford heating. Whānau without heating discussed not being able to afford power for heaters or to buy firewood. Some whānau only had heating when they were able to source free firewood.

Figure 5: Heating used by housing tenure

HNZ tenants indicated that the heaters provided with the property were often inefficient and costly to run. Curtains were not provided with the property and tenants had problems sourcing adequate curtains to properly insulate the entire house. In some cases tenants could only afford curtains and heating for one room and therefore the entire family slept in this room throughout winter. All the eight HNZ tenants said their house was always colder than they want, and six said the house was always damp, and that they had to change rooms to sleep in the same room as others to keep warm during winter. Five did not use any heating.
Figure 6: Type of heating used in the home

Inequities in housing conditions
The graph below provides a summary of the above findings comparing Māori and non-Māori children. The figures combine the answers always/often and are represented as a percentage of the Māori (twenty-seven) and non-Māori (thirteen) families surveyed. Overall non-Māori whānau lived in less crowded, warmer homes, where the need to share rooms in winter to keep warm was not necessary.

Figure 7: Summary of housing conditions comparing Māori and non-Māori children

Further housing issues experienced by participants are illustrated by the following case examples and questionnaire responses.

Case example one: A family moved into a HNZ property with a new baby and ‘...in an attempt to keep the house warm and dry enough for the baby’s wellbeing ran heaters and a dehumidifier for the first month. Their power bill for that month was $500 and they have not been able to afford any heating since then.’

Case example two: One mother described her attempts to contact HNZ for maintenance on the house she was living in by stating: ‘I was basically told I would have more chance of winning the Lotto than getting any repairs approved.’

Another interviewee who was caring for her new-born grandchild described her HNZ property as ‘an icebox’, despite being insulated. She regularly has up to sixteen grandchildren staying with her.

When tenants requested repairs or maintenance from HNZ, in most cases after a long wait (often months) and many phone calls, the tenants received a letter saying that the request was not approved, without explanation. When interviewees were asked if they had ever talked to HNZ about the cold/damp/mould or crowding issue they described, the general response was that there was no point and that if an HNZ representative did reply to your request, it would generally be turned down.
Most interviewees who lived in private rentals said that landlords were responsive to requests regarding maintenance and many of these properties had had insulation retro-fits completed. Several interviewees indicated that there were rental properties available to them that they perceived to be of a ‘good’ standard of housing at a reasonable price. A major problem for tenants entering into better quality housing was the large deposit and bond required by the landlord at the beginning of tenancies.

Many of those who identified themselves as living in a non-rental situation lived in homes owned by extended whānau such as grandparents or aunts and uncles. In most of these situations, interviewees were aware of the effect of heating or insulation on their children’s health and were working to improve their situation according to their financial status.

**Discussion**

This pilot study partially met the aims set out above. Functional crowding contributed significantly to total crowding experienced by whānau, similar to the findings of the 2013 Wellington study which showed a greater prevalence (47%) of total crowding than revealed by analysis of person to bedroom ratio alone (26%) (Denning- Kemp G, Abdulhamid A, Albabtain, 2012).

Crowding was difficult to assess rapidly for several reasons. The number of bedrooms was not representative of where everyone in the household slept; many whānau used the living area to sleep in and/or all sleep in one room at night to keep warm and it was sometimes difficult to ascertain the actual sleeping arrangements. Details about potential crowding often emerged from further discussions during the interviews rather than from specific questioning relating to household occupancy. Brief questioning is likely to only identify a percentage of the housing and crowding issues experienced by tamariki, and given the time pressures for nurses and other staff taking admission information, adding more detailed questioning around housing may create an unrealistic workload in the hospital setting.

Tamariki Māori are admitted at disproportionate rates compared to non-Māori children in Northland for preventable conditions, particularly respiratory infections. In this pilot study, Māori children were disproportionately living in crowded and poor quality housing. All seven homes identified as ‘crowded’ were occupied by Māori whānau. Māori whānau were more likely than non-Māori whānau to have housing that was crowded, damp and cold, and/or were unable to afford heating. A significant proportion (37%) of Māori whānau always or often had to change rooms in winter just to keep warm, while no non-Māori families did. Functional crowding (for example, sharing rooms at night to keep warm) increases the true prevalence of crowding and thus potential exposure to infectious disease risks for many of the whānau interviewed.

Home ownership was associated with better quality housing and less exposure to health risks in this study, as in other studies. HNZ tenants in Northland consistently reported poorer housing conditions than whānau in both private rental homes and those in homes owned by parents or family members. All of the HNZ tenants identified as Māori. The comparison of housing tenure and health exposure in our study shows similar findings to the Wellington study; however the latter did not specifically look at HNZ rentals compared to private rentals. Our study showed higher housing-related risk factors for those whānau in HNZ rentals than for those in private rentals. These findings suggest that referral to HNZ in Northland at present is unlikely to reduce children’s exposure to housing-related health risk factors.

The 2013 Wellington hospital study had a high proportion of Pacific Island children in their study population, given Wellington’s demographics (Denning-Kemp G, Abdulhamid A, Albabtain, 2012). However comparison between the Māori and New Zealand European populations of that study show similar outcomes to this Northland study, with Māori children over-represented in preventable hospitalisations over winter and disproportionately exposed to many of the associated housing risk factors (Denning-Kemp G, Abdulhamid A, Albabtain, 2012).
It was observed that in the earlier stages of the pilot study period there appeared to be higher rates of infants <1 year of age admitted to hospital with respiratory illnesses, who lived in HNZ homes. The reason given for hospital admission was based on the whānau description and the interviewer’s observation, and this was not objectively verified. However findings from the Wellington study would support this observation: Māori children, particularly under one year of age, were over represented in respiratory-related admissions in winter (40% of Māori admissions, compared to 26% of New Zealand European admissions) (Denning-Kemp G, Abdulhamid A, Albabtain, 2012). In addition, seasonal variation may have had some effect. The average weekly minimum and maximum temperatures in September when the survey began ranged from a low of 6°C to a high of 16°C. These temperatures had increased to an average low of 13°C and a high of 17°C by late September when the survey ended (New Zealand Weather, 2013).

This study has some limitations. It had a small sample size of forty interviewees and was conducted in September when average temperatures were slightly warmer than winter, and therefore may have captured less accurately the situation for families in winter. Discharge diagnoses were not analysed with respect to housing factors, but this could be done in future studies. However this pilot study does illustrate that structural and functional crowding, and damp and cold housing conditions, are experienced by a significant proportion of children admitted to Whangarei hospital, and are likely to contribute to their ill health.

**Recommendations**

- Identifying the true extent of crowding is not a simple process. The effects of crowding do not exist in isolation and therefore questions regarding dampness and heating issues including fuel poverty may also be required, in order to create an accurate understanding of the severity of housing risk factors for each case. Inspection of houses may also be very useful in gaining a detailed understanding of how standards could be improved.

- There needs to be appropriate housing identified for families once household crowding is identified as a problem. The lowest income and most at-risk whānau often live in HNZ homes, which have been shown in our study to have the most health-risk housing factors. Given the issues identified with HNZ housing stock in this study, maintenance and quality issues should be urgently explored with HNZ and MSD locally before any further referral pathways can be set up to these agencies. Prioritising improvements in government owned housing would target many of the highest need families in Tai Tokerau, and potentially contribute to reducing the observed inequities in health outcomes.

- Ongoing analysis of existing hospital admission information with known factors associated with housing in Northland (age, ethnicity, diagnosis and repeat admissions) should be used to support advocacy measures. A larger study into crowding and housing issues may be required to further support development of a public health advocacy approach to housing.

- An inter-agency healthy housing strategy for Tai Tokerau could be developed, focusing on housing as a key modifiable determinant of health outcomes, particularly for tamariki Māori. It could also support local implementation of a “warrant of fitness” for all rental properties, as is currently being piloted in other areas of New Zealand, and other housing interventions.

**References**


Whānau Pack – Tools for families and parents with teenagers

Dave Hookway1
(dave.hookway@northlanddhb.org.nz)
1Northland District Health Board, Whangarei, New Zealand

Issue
Statistics show that a significantly higher proportion of Northland secondary school students reported currently drinking alcohol than that found for the rest of New Zealand. Binge drinking was very common among students with 45% of all Northland students (or 64% of those who were current drinkers) reporting that they had drunk to this extent at least once in the previous four weeks (Adolescent Health Research Group, 2011). Recent studies demonstrate the significant, enduring, and protective influence of positive parenting practices on adolescent development. In particular, parental monitoring, open parent-child communication, supervision, and high quality of the parent-child relationship deter involvement in high-risk behaviours such as drinking and self-harm (Elise, Devorea, Ginsburg (2005). For example, research shows that rangatahi who share meals with their whānau at least five times a week are less likely to smoke, abuse alcohol, become overweight or have suicidal thoughts and behaviours. They are more likely to feel better about themselves, do better at school and feel more connected with their parents and family (Council of Economic Advisors, 2000).

Aims
To develop a unique Tai Tokerau resource that provides simple, positive parenting strategies for use by people who work with whānau; to enable parents/care givers to strengthen their relationships, communication, role-modelling and quality time spent together with their rangatahi.

Actions
We examined traditional Māori parenting strategies (Jenkins, Harte, 2011) along with the latest international and local evidence on parenting and results from the Youth2000 series of National youth health and wellbeing surveys. Key information on the developing adolescent brain was assessed together with evidence on the impact of early drinking of alcohol by young people. Current information on alcohol, drinking guidelines and the Sale and Supply of Alcohol Act 2012 was collated.

A rationale highlighting the importance of delaying the onset of early drinking was established in the opening chapters of the resource. A process-based approach was used to highlight the areas of time, boundaries, monitoring, communication and role-modelling as key parenting factors with simple everyday strategies promoted in each area. Strategies for delaying the early use of alcohol by rangatahi and staying safe are also explored.

Achievements
The Whānau Pack is a sixty page booklet produced featuring local imagery from Tai Tokerau. A set of four posters highlighting key messages from the resource were also produced. An electronic version was created and made available through a number of websites.

Conclusions
Presenting simple parenting strategies in a visually spacious manner has resulted in a much sought after resource by both those working with whānau and parents/caregivers. They have indicated feeling inspired by the simplicity of the resource and a relevance to them from the use of local people and locations from Tai Tokerau which has given the resource a distinctly New Zealand feel.
References


Southern hemisphere influenza and vaccine effectiveness research and surveillance (SHIVERS) in New Zealand

Sue Huang1, Nikki Turner2, Michael Baker3, Colin McArthur4, Debbie Williamson1,2,4, Cameron Grant3,4, Sally Roberts3, Debbie Aley4, Adrian Trenholme5, Conroy Wong5, Susan Taylor6, Shirley Lawrence5, Kirstin Davey5, Tim Wood1, Ange Bissielo1, Sarah Radke1, Don Bandaranayake1, Ruth Seeds5, Graham Mackereth1, Angela Todd1, Nevil Pierse3, Paul Thomas6, Richard Webby6, Mark Thompson7, Jazmin Duque7, Diane Gross7 and Marc-Alain Widdowson7, on behalf of the SHIVERS investigation team
(ange.bissielo@esr.cri.nz)
1Institute of Environmental Science and Research (ESR), Wellington, New Zealand
2University of Auckland, Auckland, New Zealand 3University of Otago, Wellington, New Zealand 4Auckland District Health Board, Auckland, New Zealand
5 Counties Manukau District Health Board, Auckland, New Zealand
6 WHO Collaborating Centre, St Jude Children’s Research Hospital, Memphis, USA
7 Centers for Disease Control and Prevention (CDC), Atlanta, USA

Issue
Influenza and other respiratory infections have a large and potentially preventable impact on population health. The "Southern Hemisphere Influenza and Vaccine Effectiveness Research and Surveillance" (SHIVERS) project is a multi-centre and multi-disciplinary collaboration established in 2012 for a five year period. The SHIVERS project has nine objectives: 1) understand severe acute respiratory infections; 2) assess influenza vaccine effectiveness; 3) investigate interaction between influenza and other respiratory pathogens; 4) ascertain the causes of respiratory mortality; 5) understand non-severe respiratory illness; 6) estimate influenza infection through a serosurvey; 7) determine influenza risk factors; 8) study the immune response to influenza; and 9) determine the healthcare and societal economic burden and vaccine cost-effectiveness of influenza.

Aims
The focus of this presentation is to describe the pattern of influenza-associated severe acute respiratory infections (SARI), influenza-like illness (ILI) and measure influenza vaccine effectiveness for the 2013 influenza season.

Methods/ action
We established two surveillance systems for the 838,000 residents living in the Auckland and Counties Manukau District Health Board's. The first is active, prospective, population-based surveillance for all hospitalised SARI cases (four hospitals), a portion of non-SARI respiratory cases, all ICU respiratory admissions and deaths. The second is sentinel (eighteen providers) general practice-based, active, prospective, population-based surveillance (covering 12% of the catchment population) for ILI cases. A case test-negative design was used to estimate influenza vaccine effectiveness.

Results/ achievements
During the 2013 influenza season (29-April to 29-September 2013), influenza- associated SARI rates were highest in infants (122/100,000 population in persons aged less than one year), in Pacific (51/100,000) and Māori (27/100,000) ethnic groups, and in those from the most deprived socioeconomic status (SES) group (51/100,000). In contrast, influenza-associated general practice ILI consultation rates were highest in children aged 5-19 years (640/100,000) and 1-4 years (488/100,000), in the Asian ethnic group (573/100,000) and in those from the least deprived group (498/100,000). Influenza vaccination provided 52% (95%CI 32-66) effectiveness against laboratory-confirmed influenza hospitalization and 56% (95%CI 34-70) against laboratory confirmed influenza presenting to general practice.
Conclusions
Results from SARI and ILI surveillance during the 2013 influenza season showed contrasting socio-demographic patterns with inverse ethnic and deprivation gradients seen for influenza-associated ILI in sentinel practices compared with influenza-associated SARI in hospitals. This study found moderate effectiveness of influenza vaccine against medically-attended and hospitalised influenza, though the populations presenting with influenza are markedly different in general practices compared to those admitted to hospital.

Implications
The hospital-based SARI and sentinel practice-based ILI surveillance systems provide a research platform to comprehensively investigate influenza epidemiology, virology, immunology and vaccine effectiveness. Results from SHIVERS investigations will help to improve disease surveillance, guide targeted vaccination, inform vaccine design, optimize clinical management and laboratory diagnosis, identify risk factors, and understand host immune responses.

Acknowledgements
The SHIVERS project is a multicentre and multidisciplinary collaboration. Special thanks to these collaborating organisations for their commitment and support: ESR, Auckland District Health Board (DHB), Counties Manukau DHB, University of Otago, University of Auckland, US CDC and World Health Organization Collaborating Centre at St Jude Children’s Research Hospital in Memphis, USA. Special thanks to: the research nurses at Auckland DHB; the research nurses at Counties Manukau; staff of the WHO National Influenza Centre, ESR; the Health Intelligence Team, ESR; staff of the Auckland DHB, laboratory and Counties- Manukau DHB laboratory; IT staff and SARI surveillance participants. Also, a special thanks to Dr Dean Erdman from Gastroenteritis and Respiratory Viruses Laboratory Branch, US CDC, who provided the real-time PCR assay for non-influenza respiratory viruses. Support in kind was provided by the Ministry of Health.
Tapuaki: Pacific pregnancy and parenting innovation tools

Amio Ikihele¹, Jacinta Fa’alili-Fidow and Mary Roberts¹
(a.ikihele@auckland.ac.nz)
¹TAHA Well Pacific Mother & Infant Service, University of Auckland

Background information
Around two thirds of pregnant Pacific mothers do not seek out a midwife during their pregnancy and only 1% of all Pacific people participate in childbirth education programmes. Two studies conducted in Counties Manukau District Health Board (CMDHB) found that factors associated with late initiation of pregnancy care was related to difficulties finding a lead maternity carer in their area, not understanding the maternity system, high parity, first pregnancy, unemployment prior to pregnancy and Cook Island ethnicity.

The latest Perinatal and Maternal Mortality Review (PMMRC) report found that women who are of Pacific ethnicity, smoke during pregnancy, living in high areas of socioeconomic deprivation, overweight and obese, in addition to having their first baby, have significantly higher rates of still birth and neonatal death compared with New Zealand European, Indian and Asian mothers. These findings support the need of finding alternative ways of engaging with Pacific pregnant women (including their families) early and the importance of pregnancy care.

A recent New Zealand technology review highlighted that within the past five years, mobile devices have transitioned from being used primarily for voice and text to more sophisticated multi-functional usage based on their mobile media capabilities. With smartphones now accessible to the masses, it is the most common web access device worldwide. By 2018, it is estimated that 90 per cent of New Zealanders will own a smartphone.

Consumers are also frequently engaging in health information via the internet. While access at home is still an issue for Pacific people’s compared with other groups, access anywhere e.g. schools and libraries shows Pacific people are accessing more than we think. Statistics New Zealand data is showing that while Pacific peoples access is lower than European, it is approximately 65%, which shows that there is still a significant number of Pacific families with access to the internet at home. Consequently, it is clear that health communication concepts need to be able to use these innovative platforms when disseminating health information.

The Tapuaki smartphone application and website is a prevention-focused Pacific maternal and infant health intervention designed to engage with Pacific mothers, fathers and their families through social innovation. Specific elements integral to this process is the development of evidence-based, engaging tools and resources and an increase in understanding/health literacy of pregnancy and parenting health, that could help raise family and community awareness, including the potential to trigger action within the family setting.

The programme
Improving health outcomes for Pacific mothers and babies is the motivation behind the Tapuaki innovation tools. The purpose is also to make information more accessible for Pacific pregnant women of all ages, and their families, which in turn helps to empower this high risk group to talk about pregnancy and parenting, ask questions, seek advice, and make more informed choices about the care of pregnant women and infants.

The new Tapuaki smartphone app and website is a first of its kind in New Zealand and will allow Pacific mothers and other members of the family to find information leading up to, during and post pregnancy. The app provides a convenient way of learning about oneself and the development of baby through the duration of pregnancy. It also provides a ‘find a midwife’ (by suburb) feature for Auckland midwives only. The website
is designed to be user-friendly with the main point of difference being that it specifically caters to the Pacific communities by having translated terms in four different Pacific languages (Samoan, Tongan, Cook Island & Niuean). More Pacific languages will follow later in the year (Fijian, Tuvalu, Tokelau, Kiribati). While we accept that not all Pacific mothers and families will have access to a smartphone or the internet, these tools are part of a more comprehensive programme which includes face-to-face pregnancy and parenting education workshops.

**Key findings**

No amount of tools, resources, clinical systems and capacity will make a difference to Pacific health outcomes without a focus first on engaging with Pacific families. We also acknowledge that there is no single approach for engaging with Pacific families. Consideration needs to be given to several strategies required to reach all Pacific families.

The Tapuaki smartphone application and website is the only known programme of its kind for Pacific people in New Zealand. It has the potential to improve Pacific women's access to, and use of, maternity services and antenatal education. Through the use of evidence-based and culturally relevant content and materials, Pacific engagement, health literacy, empowerment and participation in antenatal and maternity care can be achieved.

**References**


Little Lungs – Pūkahukahu Iti: Growing up Smokefree.

Katie Jahnke¹, Anna Frost¹
(katie.jahnke@southernpho.health.nz)
¹Southern Primary Health Organisation, Dunedin, New Zealand

**Issue**
Second-hand smoke exposure is responsible for around 500 deaths in New Zealand each year as well as long term morbidity for many others. The New Zealand Government has committed to a Smokefree Aotearoa by 2025; however in order to achieve this we need to move beyond the health care setting and seek support from other sectors. The early childhood setting has largely been ignored when it comes to implementing Smokefree projects, yet in New Zealand we have a 96% participation rate in early childhood education, making it a perfect place to promote Smokefree homes and cars messages.

**Aims**
The aims of this project were to reorientate early childhood educators to the Smokefree agenda, familiarise them with Smokefree cars and homes messages and support them to integrate a consideration of Smokefree messages into their professional practice.

**Methods/actions**
Following a successful pilot, early childhood centres were approached to participate in the programme. Centres located in areas of high deprivation or with high numbers of Māori and/or Pacific students were given priority. The programme involved a workshop delivered on-site during a staff meeting and covered topics such as the 2025 goal, second-hand smoke facts, practical ways to engage whānau and resources available to support this. A follow up visit was offered a month after the workshop for staff to discuss learning and plan action within their centre. Additional resources were provided electronically to all centres involved in the programme. Ongoing support is provided on a ‘as requested’ basis.

**Results/achievements**
Evaluation forms were received from one hundred and forty-nine early childhood educators from thirty-two centres (94% response rate). Some of the results included: before the training 59.1% of participants thought it was important or extremely important to incorporate Smokefree into their practice. This increased to 96.5% after the training. Before the training only 26.6% of participants felt confident or extremely confident to incorporate Smokefree into their practice; after the training 82.4% felt confident or extremely confident. There has also been some exciting activities happening in centres to promote Smokefree cars and homes such as surveys, newsletters, displays, policy development, quit card training, signage audits, and participation in World Smokefree Day events.

**Conclusion**
In the twelve months since the launch of the programme centres have provided encouraging and positive feedback. This represents a marked change from initial encounters where raising Smokefree cars and homes with parents and caregivers was seen as a ‘bridge too far’. Today there are many enthusiastic and supportive early childhood educators delivering Smokefree messages to whānau in our community.

**Implications**
The early childhood setting is an important place to implement health programmes as the educators have a unique relationship with parents, caregivers and extended whānau. Little Lungs – Pūkahukahu Iti is still evolving. We are currently incorporating more Māori philosophies and updating content in response to feedback from evaluations. We also plan to deliver it in other more rural parts of Otago and Southland.
Teaming up to take the pressure down

Namalie Jayasinha¹, Julia Rout¹
(julia.rout@stroke.org.nz)¹
¹The Stroke Foundation of New Zealand, Wellington, New Zealand

Issue
Stroke is New Zealand’s third largest killer, yet around 80% of strokes are preventable. Keeping blood pressure at a healthy level is one of the most important things that people can do to reduce their risk of stroke. Around one in five New Zealanders have high blood pressure.

Aim
The aim of the Down with Blood Pressure Campaign was to raise awareness amongst New Zealanders about blood pressure, its relationship to stroke, and the importance of having regular blood pressure checks.

Methods
Working in partnership with Foodstuffs Ltd, blood pressure testing sites were set up at supermarkets nationwide along with some non-supermarket locations. Tests were carried out by St John and Wellington Free Ambulance volunteers from 10am-2pm on the 5th October, 2013. Rotary volunteers distributed blood pressure information packs and recorded blood pressure readings along with participant demographics. Participant recall of their last blood pressure reading was also recorded. A telephone survey was undertaken three months later to evaluate short term campaign outcomes. The campaign has now run for four years allowing for analysis of changes in campaign measures.

Results
In 2013, nearly 20,000 shoppers had their blood pressure tested at 168 different sites, an increase on previous years. Demographics were close to the national average with slightly more females and people of European ethnicity. Around 60% of participants had blood pressure falling in the ‘normal’ range, while 37% had ‘raised’ readings. These findings are similar to previous years. In 2013, 13% of participants were referred to a GP due to high readings. 28% of participants said they had at least some knowledge of their last blood pressure reading. This compares with 20% in 2012 and just 13% in 20113. Over 80% of participants had awareness of high blood pressure being the major risk factor for stroke in 2013. 40% of participants in a follow up survey (n=367) said they were taking actions as a result of their blood pressure reading or due to information received on the day (mostly lifestyle related).

Conclusions
This collaborative campaign is far reaching and results suggest it is playing a part in raising New Zealanders awareness of blood pressure, its relationship to stroke, and the importance of having regular checks. Though behaviour change was not a primary aim of the campaign, we hypothesise that it may be related to the fact that high blood pressure is often asymptomatic. Readings therefore act to raise participant understanding of the ‘seriousness’ of high blood pressure and their ‘susceptibility’, which are both key pre-requisites to behaviour change in the Health Beliefs Model.

Implications
• Further explore the logic behind the reported behaviour change to strengthen future campaigns.
• Explore the feasibility of contributing to the Government’s health targets by using the campaign as a ‘sign post’ to drive participants to their GP for a full heart and diabetes check.
Climate change and the right to health for Māori in Aotearoa/New Zealand

Rhys Jones¹, Hayley Bennett², Gay Keating³, Alison Blaiklock⁴
(rg.jones@auckland.ac.nz)
¹Te Kupenga Hauora Māori, University of Auckland, Auckland, New Zealand
²Public Health Physician, Rotorua, New Zealand
³Eru Pōmare Māori Health Research Centre, University of Otago, Wellington, New Zealand
⁴Department of Public Health, University of Otago, Wellington, New Zealand

Issue
Climate change threatens to exacerbate existing inequities in health between Māori and non-Māori in Aotearoa/New Zealand. Yet the challenges posed by climate change are accompanied by considerable opportunities to advance indigenous rights and reduce health disparities. New Zealand, having ratified human rights treaties that include the right to health, must be accountable to its obligations relating to climate change and Māori health.

Aims
We sought to elucidate the relationships between climate change and Māori health from a right-to-health perspective, and to identify obligations for the New Zealand government.

Methods/actions
We examined issues related to climate change and Māori health using a right-to-health analytical framework. The scope for this analysis included the effects of climate change itself, approaches to minimise climate change by limiting greenhouse gas emissions (mitigation) and future adaptations to a warmer climate (adaptation).

Results/achievements
Climate change, if allowed to continue unchecked, is incompatible with progressive realisation of the right to health for Māori in Aotearoa/New Zealand. It is also clear that both mitigation and adaptation to climate change pose serious threats to the right to health for Māori if equity is not prioritised.

Conclusions
The New Zealand government has obligations arising from the right to health to address a broad range of issues at many different levels. The analysis we have conducted identifies a number of important areas where the government is currently failing to meet these obligations, as well as future measures that are required in order to avoid further encroaching on the right to health for Māori.

Implications
Based on the findings of this work, there is a clear obligation on the New Zealand government to dramatically and urgently reduce domestic greenhouse gas emissions. Climate change mitigation strategies with clear health and equity co-benefits should be adopted immediately with appropriate monitoring and evaluation. Other interventions need to be designed, implemented and evaluated carefully in partnership with indigenous communities. It is important that these efforts are underpinned by a commitment to self-determination for Māori communities and respect for indigenous philosophies and knowledges.

For more information see: http://www.hhrjournal.org/2014/07/01/climate-change-and-the-right-to-health-for-maori-in-aotearoa-new-zealand/
Prospects for advancing tobacco control in Tokelau

**Ashton Kelly**, **Silivia Tavite**, **George Thomson**, **Nick Wilson**

(ashton.kelly85@gmail.com)

1University of Otago, Wellington
2Director of Health, Department of Health, Tokelau

**Issue**
Tokelau has high smoking rates (46% of adults in one survey) and like other jurisdictions, a growing chronic disease burden. To effectively deal with the high prevalence of non-communicable diseases in Tokelau, reducing this smoking rate will need to be a high priority. Given New Zealand’s close relationship with Tokelau there are good arguments why this country could do more to assist Tokelau with this task. In terms of tobacco control, New Zealand has already provided some support to Tokelau in terms of assisting in drafting tobacco control legislation (Allen, 2012), but much more could be done. There are also good self-interest reasons why New Zealand should offer more help to Tokelau in this regard as New Zealand already indirectly pays (via development assistance) for some of the health care in Tokelau.

**Aims**
We aimed to gauge the level of support in Tokelau at a community and official level for enhanced tobacco control policies and to review the overall context for advancing tobacco control in this setting.

**Methods**
The lead author (AK) spent eight weeks working in Tokelau on a medical elective (December 2013/January 2014) and conducted informal interviews with community members and leaders, health workers, Government officials and Police. A literature search focused on tobacco control in Pacific Island jurisdictions.

**Results**
From the informal interviews conducted it appears that members of Tokelauan society are concerned with the impact cigarette smoking is having on the community and are in favour of additional support for quitting. There is also strong support at official levels for enhanced tobacco control policies. At the societal level, a number of factors were identified that favour advances in tobacco control in Tokelau:

- There is only a single point of entry via boat from Samoa and no airport (so tobacco smuggling is relatively easy to prevent)
- There is only one store on each atoll and thus only one place to purchase cigarettes; tobacco is not grown in Tokelau
- Innovative public health policy already exists – there is ban on soft drink sales, restrictions on alcohol sales, and a fully solar powered electricity grid.

**Conclusions**
Our impression from conversations with people at all levels of Tokelauan society is that there is strong support for enhanced tobacco control. Tokelau’s remoteness makes reducing smoking prevalence and even eventual elimination a feasible goal in the coming years, but it may benefit from New Zealand’s assistance to achieve this.

**Implications**
The New Zealand Government has the goal of becoming a Smokefree nation by 2025. It has also supported work to facilitate some Pacific nations meeting their obligations under the Framework Convention for Tobacco Control. The New Zealand Government (or tobacco control non-governmental organisations in New Zealand) could provide more assistance to Tokelau to help reduce the high rate of smoking. Furthermore, if Tokelau became a smokefree jurisdiction in the medium term, then this could provide a valuable example to other countries in the Pacific and island nations worldwide.
Under 5 Energize

Madeleine Kirk¹, Stephanie McLennan¹
(madk@sportwaikato.org.nz)
¹Sport Waikato, Hamilton, New Zealand

Issue
Obesity rates among New Zealand children are increasing. Māori and Pacific children experience higher levels of obesity. The Waikato District Health Board area has a higher than average representation of Māori children and higher than average deprivation and socioeconomic needs. 95% of all children (Māori 90.9% and Pacific 86.8%) attend some form of early childhood education.

Aims
The overall aim of the project is to reduce the rate of weight gain of pre-school children through better nutrition and regular physical activity.

Methods/action
A health service has been developed and is in the process of being delivered in early childhood centres in Hamilton, South Waikato, North Waikato and the Thames/Hauraki areas. It is modelled on the successful Project Energize programme in schools. Early Childhood Centres (ECC) conduct a needs assessment of food, nutrition, and physical activity provided and develop a six monthly action plan detailing agreed Centre improvements. Energizers work alongside to provide support, nutrition and physical activity resources and workshops to achieve action plan goals.

Results/achievements
There are 121 ECCs enrolled involving 4939 children and 3035 families. The reach is 93% of the ECCs approached to be a part of this project. Under 5 Energize ECCs include more Māori and Pacific children. An evaluation plan is in place using the RE-AIM framework and monitoring of the before check body size data. Anecdotal feedback from the Under 5 Energizers indicates the project process (stocktake, needs analysis and action plan) is raising the awareness of the current nutrition and physical activity environment and identifying areas for improvement.

Conclusions
Initial project reach is high and demonstrates ECCs are engaging in the Under 5 Energize health service. Anecdotal feedback indicates ECCs are making changes to improve the food brought from home or provided by the centre and increase opportunities for planned and spontaneous play using fundamental movement principles. Further evaluation will provide detail of the progress and impact of the programme.

Implications
ECCs are open to this type of intervention. There is potential for the project to expand to other Waikato ECCs excluded from the original sample due to funding and capacity constraints. Regular review of action plans to refocus on areas identified for change will further enhance the potential for improvement to nutrition and physical activity environments within ECCs.
Factors associated with delay in diagnosis and treatment of Pulmonary Tuberculosis in Bangladesh: A mixed methods study

Fatema Khatun1, Rafiqul Islam1, Tamanna Sharmin1, Ahmed Shafiqur Rahman1, Ziaul Islam1, Mohammad Enamul Haque2, Abdul Hamid Salim3, K. Zaman1, Tahmeed Ahmed1
(kfatema@icddrb.org)
1International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR, B), Dhaka, Bangladesh
2Directorate General of Health Services, Dhaka, Bangladesh
3Koninklijke Nederlandse Centrale Vereniging (KNCV) Tuberculosis Foundation, The Hague, Netherlands

Introduction
Delay in diagnosis and initiation of treatment of pulmonary tuberculosis (TB) results in severe disease and increased burden of the disease in Bangladesh where disease prevalence is high. This study is designed to explore the underlying socio-cultural factors that influence delay in TB diagnosis and treatment.

Methods
In this mixed methods study, we interviewed newly diagnosed TB patients aged >15 years attending selected urban and rural TB clinics with a structured questionnaire during 2009 to 2010. The qualitative component includes free-listing, severity ranking, pile sorting and in-depth interviews. We took 62 day cutoff points for total delay to dichotomise delay period as outcome variables. Bivariate and multivariate logistic regression analysis was performed. Qualitative data were transcribed and coded to classify themes and sub-themes.

Results
A total of 278 patients were enrolled. The median total delay was 62 days (IQR 37, 96 days). Higher degree of stigma (AOR 2.0; 95% CI 1.2-3.4; p=0.008, older age group (AOR 3.3; 95% CI 1.7-6.4, p<0.001) and rural residency status (AOR 3.7; 95% CI 1.9-7.3; p< 0.001) were associated with longer delay in TB diagnosis and treatment. Respondents knew about TB from television, could recall one symptom (cough > three weeks) and were aware that TB is a curable disease. However, they did not seek treatment until the local healthcare practitioners referred them to the TB clinic. The perceived social stigma related to TB resulted in delay care seeking and the patient diagnosed with TB concealing his/her status from family members.

Conclusion
There is an urgent need for improving comprehensive service delivery to reduce delay in diagnosis and treatment of TB in Bangladesh. Stigma prevents patients from seeking care and should be alleviated by public health information and counselling is needed to protect TB patients from the adverse impact of avoidable stigma.

Acknowledgement
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Collaborative partnerships: Effective community engagement in rheumatic fever awareness campaigns in the Bay of Plenty

Lindsay Lowe¹
(lindsay.lowe@bopdhb.govt.nz)
¹Toi Te Ora - Public Health Service (Toi Te Ora)

Issue
Acute rheumatic fever (ARF) is an avoidable cause of illness and premature death in New Zealand, with high rates in Māori and Pacific children. Overcrowding, economic deprivation and decreased treatment opportunities increase the risk of a person developing ARF. Raising awareness of the disease, its consequences and how to prevent it has been a key focus for Toi Te Ora since 2009. Local understanding, partnership and collaboration within the whānau, hapū, iwi context has been central to this approach.

Aims
To increase awareness of the importance of getting children’s sore throats checked and treated quickly to prevent ARF. To increase general awareness of ARF across the Bay of Plenty (BOP).

Methods
Multi-media awareness campaigns were run by Toi Te Ora in 2010, 2011, 2012 and 2014. Funding was provided by BOP District Health Board. The key audiences were Māori and Pacific parents, families, whānau, of school-aged children. Activities included:

- Press releases, advertorials and commissioned articles in newspapers
- Locally voiced radio advertisements on community/iwi radio stations (with a te reo mihi)
- Kanohi ki te kanohi (face-to-face) approaches
- Development and dissemination of English and Te Reo resources and panui
- Development of a rheumatic fever website

Innovative resources and messages incorporating local whakaahua were utilised for the campaigns. School based throat swabbing programmes, pamphlets and posters were fronted by local champions who generously shared their images and stories. By ensuring local ownership of the resources and messages, community health workers (CHWs) empowered their tamariki, schools and communities.

Results
Street surveys (n=732) undertaken in Tauranga, Whakatane, Opotiki and Kawerau in 2010 and 2011 demonstrated an increase in knowledge and awareness of ARF.

A separate survey undertaken by Toi Te Ora in 2012 verified this result, with 65% of respondents answering that sore throats can lead to ARF and 82% reporting that if they had a sore throat they would ask for a throat swab. This was evidenced by a marked increase in the number of throat swabs taken across the BOP from 2010. An evaluation of the 2014 awareness campaign was undertaken in August. This coincided with the 2014 Winter Campaign run by the Ministry of Health and Health Promotion Agency. A key finding was that the television commercials featuring the Katoa twins were well received and clearly recalled by 48% of respondents.

Conclusions
The ARF awareness campaigns used a variety of communication modes to develop and disseminate culturally appropriate messages and resources. Running the multi-media campaigns in partnership with the school based swabbing programmes ensured messages built on existing relationships and maintained a presence after the media campaigns finished. Television advertisements also appear to be very effective.

Implications
Collaborative partnerships, community and kanohi ki te kanohi engagement were crucial elements of effective awareness campaigns in the BOP. These approaches, messages and resources have been shared regionally and nationally. Working in partnership to address ARF will contribute to achieving equity for Māori and Pacific children.
Integrated research design for sustainable cities: Te Ara Mua – Future Streets

**Alex Macmillan¹, Hamish Mackie², Karen Witten³, Melody Oliver⁴, Joanna Stewart⁵, Jamie Hosking⁶, Adrian Field⁷, Alistair Woodward⁵; Rau Hoskins⁶**
(alex.macmillan@otago.ac.nz)
¹Department of Preventive and Social Medicine, University of Otago, Dunedin ²Mackie Research Ltd, Auckland ³SHORE/Whariki, Massey University, Auckland ⁴Human Potential Centre, AUT University ⁵School of Population Health, University of Auckland ⁶Dovetail Consulting Ltd, Auckland; DesignTRIBE Architects, Auckland

**Issue**
Designing walking and cycling back into urban communities may be most effective at achieving a sustained shift from car trips to walking and cycling. Such a shift could deliver substantial benefits for mitigating climate change, public health, social and health inequities, and economic resilience. There is a lack of robust evidence about what designs successfully result in these integrated benefits and are generalisable.

**Aims**
1. Assess the integrated public health, social and climate outcomes of retrofitting urban suburbs for walking and cycling
2. Demonstrate the process and intervention design necessary for these outcomes to contribute to hauora Māori and Pacific wellbeing and reduce inequities
3. Identify and disseminate a generalisable process for community design that brings community, policymakers and research together

**Methods**
Te Ara Mua is a mixed methods project involving cross-disciplinary researchers. Two suburbs in Auckland were chosen based on similar urban form, socio-demographic characteristics and size. The epidemiologic study is a randomised, cluster, controlled, before-after study. We combined best evidence with a participatory design process to develop a street transformation intervention. Public forums, qualitative interviews and focus groups with schoolchildren underpinned the intervention design. Random sample quantitative surveys and pedometers, injury reporting, traffic speed and mode usage counts have provided baseline data on physical activity, travel patterns, sense of security, social connection, road user behaviour and injury. These measures will be repeated two years later at the same time of year. Simulation modelling will explore wider implementation of the intervention in Auckland and New Zealand cities.

**Achievements**
We have completed the initial qualitative research, the participatory intervention design and the baseline surveys, safety and physical activity measurements. The intervention infrastructure will be built in the summer 2014-15. The results of the research so far are presented in separate presentations of this symposium. The project has received Safe System Signature Project status from the New Zealand Transport Agency.

**Implications**
Despite having the potential to be most effective at achieving desired outcomes, urban infrastructure intervention studies are rare internationally because they are extremely difficult to do. Successful partnerships with transport agencies to undertake epidemiological research needs to build on long-standing relationships. Epidemiological studies of urban infrastructure interventions are high risk as local government infrastructure plans are subject to governance, funding and strategic shifts.

Demonstrating the value of robust evidence, and communicating methodological design in clear and convincing ways is crucial to the success of such projects. Relationships between research and local government expose tensions between designing interventions likely to demonstrate effectiveness and generalisable cost effectiveness.
Healthier supermarkets, healthier lives

Rewena Mahesh¹
(rmah060@aucklanduni.ac.nz)
¹University of Auckland, Auckland, New Zealand

Issue
The continued growth of obesity in New Zealand has placed greater numbers of individuals at an increased risk of chronic conditions. There is increasing recognition that a supportive nutrition environment is needed for people to make healthier food choices. Supermarkets are one of the most significant food environments, influencing what foods are available to the individuals and at what cost. Supermarkets generally influence consumer purchasing patterns in store through the placement of products in key prominence locations, locations that have been shown to increase consumers' visual attention and subsequently purchases. However, relatively little attention has been given to what foods and beverages are being heavily promoted within the New Zealand supermarket environment.

Aims
The aim of this study was to examine what food and beverages were located in key promotional locations within the in-store New Zealand supermarket environment, and if this differed by socioeconomic status (SES) of the area the supermarket were located in.

Methods/ action
An observational survey design was conducted to measure the placement of product categories in key promotional locations in-store using the GroPromo Tool (Kerr, Sallis, Bromby, & Glanz, 2012) in three leading supermarket chains in New Zealand (Countdown, New World, Pak ‘n Save). Food and beverage categories used in this study were selected to reflect the Ministry of Health’s Food and Nutrition Guidelines (2006) along with foods that contribute to childhood obesity. This data was collected during a six week period from September 2013 to October 2013. Twelve supermarkets were chosen, four from each supermarket chain with two each from areas of high SES and low SES. The four major food categories chosen were: unhealthy foods (included snack foods, ice-cream, crisps, soft drinks, fruit drinks, biscuits, cereals, pastry and cakes), fruits and vegetables, alcoholic beverages, staple foods (bread, meat and poultry).

Results/ achievements
Unhealthy foods as a major food category was significantly featured more at key prominence locations compared to all major categories (p<0.001). Snack foods were the most common type of food found in these locations (39%). Moreover, fruits and vegetables as a major food category was significantly featured more at key prominence locations in high SES compared to low SES store locations (p<0.05).

Conclusions
The present study found that promotions of less healthy foods such as snacks are overly represented in areas of key prominence. The dominance of these foods in these locations are of major concern as these foods contribute to obesity. The lower presence of fruits and vegetables in key prominence locations in low SES areas may further increase health inequality gap.

Reference
A transnational syndemic: Cook Islanders and their experiences of TB and type 2 diabetes

Evelyn Marsters¹
(evelyn.marsters@gmail.com)
¹University of Auckland

Issue
The type 2 diabetes epidemic is accelerating the risk of TB globally. The study of this issue is complex given the multiple layers of biological, social and political disadvantage facing those affected. This paper argues that a syndemic approach to TB and type 2 diabetes research provides a way to explore the range of harmful social and biological forces acting upon a population.

Aims
This research positions transnationalism as a complicating factor in health service access and a contributing factor to unequal living conditions for Cook Islanders. The overall aim of this research was to understand the role that transnationalism plays within the interaction of structural, political, and biological threats that produce vulnerable environments where type 2 diabetes and TB cluster.

Methods
Interviews for this research were conducted across a range of locations in New Zealand and the Cook Islands over the course of two years. The narrative data collected produced two key outputs. The first was a diagrammatic summary of the existing syndemic forces exerting influence on the TB, transnationalism, and type 2 diabetes syndemic. This summary was a crucial part of shaping the second output, a selection of five key case studies that address the overall experiences of all of the participants.

Results
The interplay between the ethnographic research and the construction of a syndemic framework produced interesting research results. Transnationalism was revealed as one of the key contributing factors to disrupted health service access, poverty and household overcrowding. In addition, stigma and masculine responses to type 2 diabetes were also found to be a significant obstacle to diagnosis and treatment.

Conclusions
This study advances research in the areas of health and migration by demonstrating that both fluid and bounded responses to health and transnationalism exist. The fluid responses highlight the positive health linkages that extend between New Zealand and the Cook Islands. The bounded responses illustrate the fractures in the social and political structures which are influencing type 2 diabetes and presenting risk factors for the TB and type 2 diabetes syndemic in the future.

Implications
Analysing more deeply the inherent connections between diseases, including the range of biological, social, and political forces at play, raises questions about health service delivery for transnational populations. In the future, research concerned with the health of the Cook Islands population needs to consider both the positive and negative impacts of transnationalism upon health outcomes.
Obtaining health equity by utilising our community connections

Sara Mason¹
(usnurseznz@hotmail.com)
¹Hawke’s Bay District Health Board

Issue
In New Zealand one in fifteen adults over the age of 45 years has chronic obstructive pulmonary disease (COPD) (Ministry of Health, 2014). This cohort of patients typically presents at diagnosis with limited functional ability and slowly decline with several acute exacerbations of their condition, never fully gaining where they were before. Pulmonary rehabilitation is a non-pharmacological management option for respiratory disease and is the recommended pathway for all patients diagnosed with COPD (Global Initiative for Chronic Obstructive Lung Disease, 2014).

Historically the connection between health care services has been superficial, with most introductions to services being made during the patients’ deterioration as services react to the crisis that is at hand. Furthermore, if patients do not fit into the mainstream healthcare ‘box’ they are often lost in the system, leaving patients unable to participate in their own health care.

Aim
To illustrate how the application of the Trajectory of Long Term Care (TLC) model in pulmonary rehabilitation programmes can work with whānau beyond the borders of the interdisciplinary health team to provide alternative treatment options and a continuum of care into the communities where the patients live.

Action
The pilot TLC programme uses a fluid tiered approach where the level of involvement was dictated by the trajectory of the individual’s health status. The intention was to work across all sectors and community settings to encourage self-management and proactive planning of expected changes in health status. Patients, families and providers were offered education and skills to promote positive outcomes. Settings for the programmes varied; dependent on circumstances and ability to participate and travel. Customised programmes, crisis plans and care plans were developed in partnership with all relationships and services involved. Local gyms, whānau, schools, churches, private and public health workers provided ongoing support in the community.

Achievements
The TLC pilot proved successful in all areas explored, with better communication between services and proactive care and crisis planning. Analysis of the pilot programme provided statistically significant (p<0.0001) decrease in hospitalisations by 63%. Improvements were also significant (p<0.0001) in patient’s ability to perform the six minute walk test with an increase by an average of 76.47% and improvement in quality of life (HBDHB, 2014a,b,c). Anecdotal results showed increased communication between services and increased implementation of management plans and crisis plans for high risk patients.

Conclusions
There is clear evidence showing the success of the TLC model within the supportive programme (SPR) but further research will need to be developed to capture the impact the TLC model has on non-traditional settings, patient outcomes and further health care savings.
Implications
The TLC pilot has developed relationships across primary, secondary and tertiary health, which will promote a continuum of care and provide for pulmonary patients who do not fit into mainstream services. In New Zealand patients with COPD have the second highest rate of hospitalisations in the OECD and account for at least 20% of avoidable hospitalisations (Organization for Economic Cooperation Development, 2011). Patients who identify as Māori or Pacific Island descent are five times more likely to die from chronic respiratory disease causes than non-Māori and die up to twenty years sooner (MOH, 2014). This cohort of patients is also four times more likely to be hospitalised with respiratory disease than any other ethnicity (MOH, 2014).

Information and services are often limited and unfortunately higher risk patients who do not fit into the mainstream healthcare ‘box’ or are unable to attend a traditional programme are often ‘lost’ in the system and unable to participate in their own health care. Pulmonary rehabilitation programmes cover the foundation of respiratory disease self-management and provide a safe, structured environment to support physical reconditioning. Rehabilitation leads to an increase in patient knowledge, quality of life, exercise tolerance and energy and decreases anxiety. It is well researched to decrease hospitalisations, readmissions, emergency department presentations and nursing home utilisation (Kacmarek, Stoller, & Heuer, 2013) with the benefits persisting for an average of two years (Guell, et al., 2000).

Due to the increased demand of patient referrals to the pulmonary rehabilitation service, a need was seen to utilise community services to support patients within their own communities and develop strategies to support high risk patients and decrease the revolving door hospitalisations. It was also recognised that there were not enough spaces in the programme to accommodate patients who could benefit from the traditional programme. This issue has been raised at a number of forums to try and find solutions to this issue to no avail. One solution suggested was to realign Pulmonary Rehabilitation into secondary services. This would, however, not solve the ongoing crisis and may in fact complicate the services further by allowing Pulmonary Rehabilitation to become further isolated from primary care and create another silo within the secondary service.

The Trajectory of Long Term Care Model (TLC) has been implemented to utilise community resources to stretch the pulmonary rehabilitation service which could not meet demand. The model expands on pulmonary rehabilitation by moving it across all health care sectors providing integrated pulmonary management using a long term conditions model. It provides services that are customised for the individual's health status using already established relationships to support patients throughout their lives moving between health services proactively.

TLC allows for the individualisation of programmes within traditional and non-traditional environments. It provides support for the patient where they are in their life utilising services already involved in their care to help deliver programmes (Figure One). Patients are placed in services dependent on the trajectory of their own health including population health-low risk, supported pulmonary rehabilitation and intensive-high risk.
Inter-professional shared decision making is the heart of TLC, with a focus on self-management and an awareness of exacerbations of condition. This shared decision making supports general practice as patients experience the progression of their condition. Support services including specialist services provide proactive management for high risk patients. TLC uses the patient's own networks and existing and future support to assist in patient care and self-management.

The intention is to work across all sectors and community settings to encourage self-management and proactive planning of expected changes in health status. Settings for the programmes can vary, depending on circumstances and ability to participate and travel. Patients are supported in rural and urban areas leading to improved quality of life through improved self-management of their condition and supported exercise. Patients at high risk have customised programmes to decrease their risks of adverse health outcomes with increased engagement of nongovernmental organisation services.

Carers of patients with respiratory disease are provided opportunities for increased knowledge of strategies to promote healthy interventions and care plans are developed mutually with the patient and whānau. Working with whānau decreases risk of exacerbation; preventing unnecessary admissions, readmissions to secondary services and presentation to general practice. Patients with respiratory disease have a higher risk of respiratory infections, hospitalisations and intensive care admissions with respiratory disease. Ensuring antibiotics are at home for exacerbations decreases the chances of severe exacerbations (Global Initiative for Chronic Obstructive Lung Disease, 2014). Working closely with general practices, Pulmonary Management supports this international standard for all respiratory patients.

**TLC Structure**

Three triage streams have been developed within TLC which incorporates primary, secondary and tertiary services into pulmonary management, with a goal of referring back to primary care and supporting patients where they are in the trajectory of their illness (Figure Two).
Population health-low risk (PH)
Pulmonary management triage recognises the general practice as the axis of care of respiratory patients and acknowledges that involvement by general practitioners can directly influence length of hospitalisation in chronic disease (Schraeder & Shelton, 2011).

The goal is a provision of episodic care and management of chronic respiratory disease. This is supported mainly by general practices, non-government organisations (NGO), aged care and mental health services through prevention, screening and education to staff and patients.

- Plans of care for respiratory patients needing support are developed mutually between the patient and the general practitioner/nurse practitioner with a Pulmonary Management Clinical Nurse Specialist providing assessment information and recommendations along with a summary of pre and post rehabilitation results

- Health care providers in NGOs, aged care facilities, mental health or disability services are provided with specialist education to ensure they understand signs, symptoms of respiratory conditions and exacerbations and preventive interventions and goals for respiratory disease

- Increase in exacerbations leads to an increase in support within the model.

Intensive-high risk (IPR)
The high impact a small subset of respiratory patients has on the health care system has also been recognised. It targets these patients through general practice offices and the acute settings to provide quick intervention within the IPR (Torgerson & Hedstrom, 2011).

IPR aggressively manages the most complex and high risk population with respiratory disease in order to control costs and improve quality of care and quality of life.

- IPR patients have been identified as patients who present with exacerbations leading to hospitalisation or emergency department presentations, end stage respiratory disease and respiratory patients undergoing surgical procedures that require anaesthesia

- Plans of care are developed with the patient and general practitioners/ nurse practitioners with speciality input to help manage frequent exacerbations of respiratory disease
• Outpatient Pulmonary Management services in conjunction with general practice and secondary services develop strategies to prevent hospitalisations and interventions which include management plans, crisis plans, self-management of their condition, breathing exercises, sputum removal techniques and one on one pulmonary rehabilitation

• IPR pre and post-surgical intervention will shorten length of stay, decrease recovery time and decrease risks of complications (Dronkers, Veldman, Hoberg, van der Waal, & van Meeteren, 2008)

• The goal is discharge to lower risk category if no exacerbations of the condition.

**Supportive-medium risk (SPR)**

The SPR category reflects the traditional pulmonary rehabilitation programmes structure with a goal to stabilise with straightforward problem solving and standard targeted evidence based interventions. Pulmonary rehabilitation either in a traditional setting or in the home has been proven to decrease hospitalisations, ICU admissions, rest home utilisation and length of stays to hospital (Seymour, 2010).

• The programme provides self-management education delivered by a multidisciplinary team, breathing exercise, sputum removal techniques and structured supported exercise

• Discharge is to a lower risk category if there are no exacerbations of condition.

To provide foundational support for the TLC model a clinical nurse specialist and a senior physiotherapist oversee the Pulmonary Management Service. They work with a registered nurse, local health professionals and gyms to deliver pulmonary rehabilitation within communities.

The clinical nurse specialist also works within the community and the hospital setting delivering intensive pulmonary rehabilitation to the high risk patients and education to patients and health care workers.

**Pilot in a rural area**

A pilot programme in a rural area provided a selected resource nurse thirty-two hours of respiratory education from the clinical nurse specialist along with one day of joint education with the local physical therapist. Meetings were held with the local gym management, structured documentation and reporting guidelines were developed. Local speakers were recruited to support the patients with education and the gym provided discounted lifetime rates to patients. Feedback from patients was very positive and results showed marked improvement from all who attended. The eight week piloted Pulmonary Rehabilitation course with the new respiratory resource nurse and the existing physical therapist was a success and they have become an invaluable asset to the community.

**Analysis**

To understand the true impact of pulmonary management, 45 patients were randomly selected and their results collated to show the impact on patients’ lives and physical ability. These same patients were followed for a year to compare with the previous year if there was any decrease in hospitalisations that could be measured. The clinical data from the TLC model has been collected and correlated and results are better than international research. Internationally, active pulmonary management has been proven to prevent unnecessary hospitalisations, intensive care presentations, decrease length of stay and utilisation of rest homes (Hui & Hewitt, 2003).

**Urban and rural results**

The six minute walk test showed a statistically significant (p<0.0001) average improvement of 76.47% compared to pre-test assessment (HBDHB, 2014b) (Figure Three) and the Chronic Obstructive Disease Assessment test showed a marked increase in patients’ quality of life (Hawke’s Bay DHB, 2014c) (Figure
The review showed a statistically significant (p<0.0001) average reduction of 63% in presentations to hospital (Hawke’s Bay DHB, 2014a) (Figure Five). Anecdotal results also showed increased communication between services and increased implementation of management plans and crisis plans for high risk patients.

**Figure Three: Graphed impact of Pulmonary Management on 45 patients**

![Graphed impact of Pulmonary Management on 45 patients](image)

**Figure Four: Chronic Obstructive Disease Assessment Test (CAT) the impact the disease has on the patient’s life**

![Chronic Obstructive Disease Assessment Test](image)

**Figure Five: Hospital presentations after Pulmonary Management**

![Hospital presentations after Pulmonary Management](image)
There is clear evidence showing the success of a SPR with the TLC model but further research will need to be developed to capture the impact the TLC model has on non-traditional settings, patient outcomes and further health care savings. The TLC model provides a fully integrated service into the community and maintains links with the interdisciplinary team within secondary services. It supports workforce development in the community by sharing knowledge which has led to positive outcomes for our respiratory patients and future succession planning for advanced nursing roles. It has proven a success with the management of pulmonary conditions within the community setting leading to decreased hospitalisations and positive health outcomes.

**References**


Improving the health literacy of secondary school students through engagement in health promotion activities with student nurses

**Belinda McGrath**
(Belinda.mcgrath@whitireia.ac.nz)
1Whitireia New Zealand, Porirua, New Zealand

**Issue**
Porirua is an ethnically diverse area with more than 60% of youth either Māori or Pacific. Many of the youth who live in Porirua are living in one of the most socioeconomically deprived areas of New Zealand. This has an impact on their health, education and potential employment opportunities.

**Main aims**
The aim of the project is to firstly increase the health literacy of secondary students in low decile schools by providing age appropriate health information in a positive, fun and interactive learning environment. The second aim is to enable student nurses enrolled in the Bachelor of Nursing programme at Whitireia Polytechnic to learn how to apply knowledge of health promotion and health literacy to nursing practice within a specific population group.

**Method**
Student nurses have organised and run a health promotion day at two Porirua colleges as an annual event. The student nurses worked in groups and provided interactive stands on a range of health topics that teach and inform secondary students about improving and maintaining positive health habits. The health promotion exposition was held in the school hall for one day. During each school period two to three classes of secondary school students visited and participated in the health promotion activities.

**Achievements**
The success of each day has been twofold. The college students benefited from the range of activities and methods that were used to learn more about their own health and wellbeing. The student nurses gained skills in the implementation of an appropriate health literate, health promotion programme of relevant health issues, as well as practicing communication skills with a range of adolescents.

**Conclusions**
When health information is presented in a fun, interactive way, college students are engaged and open to learning new information. Feedback indicates that the health promotion day is beneficial to college students and potentially increases their level of health literacy. The student nurses are often surprised at the low levels of knowledge and ability of college students in relation to their own health. By being able to put into practice the knowledge student nurses learned in class they can actively provide appropriate and meaningful learning experiences for youth.

**Implications**
These health promotion days provided an excellent avenue for college students to learn about their own health and wellbeing, as well as the provision of opportunities for student nurses to apply theory to practice. The positive feedback and outcomes from the day show that it is a meaningful project and worthwhile continuing.

Charlotte McKercher¹, Suetonia Palmer², Matthew D Jose¹,³

(Charlotte.McKercher@utas.edu.au)

¹Menzies Research Institute Tasmania, University of Tasmania, Hobart, Australia
²Department of Medicine, University of Otago, Christchurch, New Zealand
³School of Medicine, University of Tasmania, Hobart, Australia

Issue
Gender is known to influence access to healthcare and subsequent treatment patterns. Disparities in risk factors for cardiovascular disease, treatment utilisation and types of treatment received between Māori, Pacific and non-Māori/non-Pacific New Zealanders with end-stage kidney disease have been described. However, gender differences in treatment patterns within these ethnic groups have not been extensively examined. Identifying any differences is essential to ensuring appropriate delivery of care in order to optimise treatment outcomes for all patients with end-stage kidney disease.

Aims
To examine differences in treatment patterns between men and women with end-stage kidney disease in New Zealand and to investigate whether ethnicity is an important modifier of any observed differences.

Methods/ action
Adults aged ≥18 years who commenced kidney replacement therapy (dialysis or transplantation) between 2001 and 2010 in New Zealand (N=4,750) were identified within the Australia and New Zealand Dialysis and Transplant Registry (ANZDATA). Patients within ANZDATA were categorised by treating clinicians, as Māori (876 men, 624 women), Pacific (410 men, 373 women) and non-Māori/non-Pacific New Zealanders (1,548 men, 919 women). Outcomes included non-preemptive kidney transplantation, initial treatment modality, location of initial dialysis therapy and vascular access in use at first dialysis. We used Poisson regression (for dichotomous outcomes) and log-multinomial regression (for nominal outcomes) to calculate relative risks (RR) and 95% confidence intervals (CI) for outcomes for women (compared to men) adjusted for age, ethnicity, late referral to nephrological care, primary cause of kidney disease, medical comorbidities, body mass index, smoking and clustering by initial treatment centre. Potential interactions (effect modification) between gender and ethnicity for each treatment outcome were also examined.

Results/ achievements
Compared to men, women more likely to receive peritoneal dialysis as their initial dialysis modality (RR 1.24, 95% CI 1.10-1.40) and were more likely to be initially dialyzed at home rather than in a hospital/out-patient facility (1.19, 1.06-1.33). Women were more likely to receive unprepared access at first dialysis (1.10, 1.04-1.17). While there was no significant gender difference in regards to kidney transplantation, a significant interaction between gender and ethnicity was observed (0.80, 0.68, 0.95) whereby Māori men and women (0.35, 0.25-0.49 and 0.31, 0.21-0.46 respectively) and Pacific men and women (0.47, 0.32-0.68 and 0.23, 0.15-0.43 respectively) were significantly less likely to receive a non-preemptive transplant during the study period compared to non-Māori/non-Pacific men.

Conclusions
Differences exist in the treatment experiences of men and women with end-stage kidney disease in New Zealand. These gender differences appear to be consistent across ethnic groups except in regards to transplantation.

Implications
Exploration of the causes and impact of these gender differences on patient experiences and treatment outcomes has the potential to maximise patient benefit and avoid potential disparities in the delivery of care.
Heartbeat Challenge™: A successful comprehensive workplace health programme.

Judy Montgomery¹, Leah Potter¹
(jmontgomery@adhb.govt.nz)
¹Auckland Regional Public Health Service, Auckland, New Zealand

Issue
Heartbeat Challenge is a health improvement programme supporting workplace environments that are conducive to health and wellbeing. It is a multi-strategy holistic workplace health programme based on best practice frameworks, and underpinned by the Ottawa Charter, Te Tiriti o Waitangi, Te Whare Tapa Whā and Pacific models of health. The programme is funded by the Ministry of Health and is free to companies of fifty staff or more, ‘where the need is most’ i.e. lower paid workers, and those with a high percentage of Māori, Pacific, and/or South Asian staff.

Aims
Heartbeat Challenge addresses lifestyle issues and chronic risk factors in the workplace. There are five priority areas; healthy eating, physical activity, smokefree, workplace wellbeing (including stress management), and harm minimisation from alcohol and other drugs. The programme aims to develop the commitment of workplaces to creating an environment that reduces barriers and increases opportunities to improve and maintain the health of their staff (increasingly, research is being published showing that workers who are healthier have a lower risk of worksite accidents (Wren & Mason, 2010).

Methods/actions
Enrolled workplaces implement a broad range of strategies that encompass the five priority areas already mentioned. A team of health promoters, a clinical partner (Public Health Medicine Specialist) and dieticians work alongside the workplace to facilitate the programme, and help design interventions, programme indicators and measurements that achieve their desired objectives. Collaboration with community agencies is critical to the success of the programme. An award is achieved on meeting the necessary criteria. The award expires after two years, at which time the award can be renewed by completing additional health promoting interventions in each priority area, thus ensuring continual strengthening and sustainability of the programme.

Results/achievements
Heartbeat Challenge has been successful in a wide variety of types and sizes of workplaces with the added benefit of improving staff attitudes about their place of work, the company and themselves. Structural and organisational changes have occurred which are sustainable, and created an environment which has the potential to improve the health of a large segment of the working population.

Conclusions
Heartbeat Challenge is currently active in one hundred and eight workplaces throughout the Auckland region. It is a workplace programme based on best practice, and tailored to the needs of each individual workplace. A feedback form is filled out by workplaces when they apply for their award/renewal and a survey of all active workplaces is carried out annually. The responses to these inform improvements to the programme, which is continually under review with a quality improvement programme in place. Some results from these surveys will be presented.

Implications
Workplaces are an excellent site for health promotion as time spent at the workplace exceeds that spent in other locations and opportunities exist for health messages to extend beyond the workplace gates to the extended family.

Reference
Pathways for adolescents who witness or experience family violence

Loren Mooney¹
(loren.mooney@wdhb.org.nz)
¹Public Health Centre, Whanganui District Health Board, Whanganui, New Zealand

Issue
According to the Ministry of Health, family violence is a population health issue. Any experience of family violence can result in physical and mental health consequences for victims, perpetrators and children who are witnesses. Exposure to family violence increases the likelihood of other health risk-associated behaviours: smoking, substance abuse, overeating and unsafe sex.

Aims
The aim was to develop a safe pathway for staff members including the pastoral care team within secondary schools to assist in directing adolescents that disclose witnessing or experience, past or present family violence to the appropriate agencies.

Methods/actions
As public health nurses we work under the school based services programme and use the HEEADSSS (Home, Education/Employment, Eating, Activities, Drugs and Alcohol, Sexuality, Suicide and Depression, Safety) assessment tool for all year nine students within decile 1-3 secondary schools in our surrounding district. As a result of using this comprehensive clinical skills and management tool family violence has been identified as a population health issue for adolescents.

Results/achievements
One of the major health issues identified through the HEEADSSS assessment tool was adolescents who had witnessed or had personally been abused through family violence. This often contributed to the other health findings such as smoking, increased alcohol intake, low self-esteem and risky sexual behaviours. Referral agencies and support networks are available within our community but not specifically for adolescents and are inaccessible, not youth user-friendly and don't meet adolescents’ needs. Many of the identified cases did not meet Child, Youth and Family (CYFs) threshold for further action and the cases are often discharged. Often the adolescents are reluctant to disclose family violence as this may increase their risk of punishment and unsafety.

Conclusions
By working and coordinating with the wider school community and surrounding agencies, a pathway is currently being developed for adolescents who do not meet CYFs threshold or require specific support or counselling. It is imperative that when we recognise a distressed adolescent we start the dialogue, encourage, support and give them the opportunity to disclose any family violence witnessed or involved in. We should then work alongside to access a range of appropriate services and support networks within our community that will assist the adolescents’ best needs.

Implications
By working with the school community it has been identified that further assistance is required to develop and work towards policies and procedures around family violence and child protection. There is also an opportunity to coordinate agencies within our community, to be involved in teaching opportunities within the school curriculum, training school staff and the wider community on “it’s not okay” and “not their fault”, what to do and not what to do, healthy relationships and “keeping ourselves safe” and “our right to be safe”. According to WAVES Trust recommendations for training staff is identifying and recognising the signs of family violence and trauma and the effects of family violence. Helping adolescents to develop resilience and use the pathway to refer to supportive networks.
Effective public health advocacy: An assessment of the strategies used to encourage adoption of the health star rating system

Michael Moore¹,²,³
(mmoore@phaa.net.au)
¹CEO Public Health Association of Australia
²Adjunct Professor, University of Canberra
³Vice President/President Elect World Federation of Public Health Associations

Background
At a time when population health seems an easy target for budget cuts by governments, it is more important than ever for people who are interested in healthy communities to understand the importance of community and stakeholder engagement and advocacy action. Effective action takes place when many people and organisations are working together to influence the broader community and government.

Issue
The front of pack labelling Health Star Rating system provides an interesting example of how to either plan or evaluate success in healthy advocacy work. Placing this example in the context of a framework for health advocacy provides an opportunity for public health practitioners to have a considered method to plan or evaluate their own advocacy efforts.

Aims
By drawing on examples, the aim is to encourage analysis, discussion and debate on how effective community and government engagement and advocacy action can be achieved. The action should be based on sound policy development but should also understand the political nature of effective advocacy and how to bring about influence.

Methods
The presentation will use a Framework for ‘Evaluating Success in Public Health Advocacy Strategies’ (Moore, Yeatman & Pollard, 2013). This framework may be used for either planning or evaluating public health advocacy strategies. The framework will be considered in the light of advocacy work to persuade Australian and New Zealand Food Ministers to adopt the Health Star Rating system to make clear to consumers the nutritional value of packaged food.

Results/achievements
Ministers will make their final decision on the Health Star Rating system on 27th June 2014. The first author and presenter was integrally involved as an advocate for traffic light labelling, as a member of the project committee, a co-chair of the Technical Design Working Group and is now a member of the implementation oversight committee.

Conclusions
The Health Star Rating system being applied by companies to the front of packs will have significant ramifications for decision making by consumers and for encouraging reformulation by businesses.

Implications
This paper has significant implications for using science to establish policy and for providing a guiding framework for how to take the next step in ensuring the policy is implemented. The presentation will describe the process and outcomes against the framework and seek comment from the audience about the success of the particular project and the extent to which the framework can be generally applied.

Reference
“Can changes in our behaviour and homes make a difference our health?”: The implementation of an effective Eco Design Advisor program

Richard Morrison¹
(Richard.morrison@kapiticoast.govt.nz)
¹Kapiti Coast District Council, Paraparaumu, New Zealand

Issue
New Zealand homes are cold, damp and unhealthy; this negatively affects the health, financial resilience and comfort of the occupants. There are over 900,000 existing homes that have average winter temperatures 6°C below World Health Organization recommended minimum temperatures (Isaacs, Camilleri, et al 2005). The state of New Zealand homes reflects our health statistics. We have one of the highest rates of asthma in the world and an excessive winter mortality rate. We need to address how we live in our homes and the benefits that changes in our behaviour and home environment can effect.

Aims
The New Zealand Eco Design Advisor (EDA) Program (www.ecodesignadvisor.org.nz) was established to provide free, independent, tailored advice to promote warmer and healthier options in both new and existing homes to the homeowners, tenants, community groups and building professionals.

Method
The EDAs are employed by local authorities and provide a free two hour consultation which covers building health and design, material sustainability, energy efficiency, water and waste management and includes information on the government insulation subsidies. The program was initiated in 2006 by BRANZ (Building Research Association of New Zealand) to promote the concept of healthy homes. There are now EDAs in seven local authorities and the program is expanding.

Results
The EDA national survey 2012-2013 (Jaques, 2012) found that 94% of people who had used the service found it useful, quite useful or very useful with 81% already having made changes in their homes. In addition, 83% of survey participants wanted to make further changes to their homes with 62% making changes to their behaviour within the home. The survey highlights the positive effects participants noticed to their comfort and energy usage.

Conclusions
There are many barriers associated with introducing the concepts of healthier and more sustainable homes to the home occupier and to building professionals (Christie, Stoeklein & Jaques, 2007). The EDA educates by providing current information on building practices and design options and is able to translate the science into a language that can be easily understood. The face-to-face nature of the consultation allows an exchange of ideas and provides an opportunity to discuss questions as they arise.

Implications
By increasing people's expectations and awareness of the potential in their homes during the consultation and motivating them to make the changes, there is a direct benefit to the comfort and the health of the occupants.
References


Cultural and linguistic diversity (CALD) training for the health workforce in the Auckland region: An evaluation of the benefits and effectiveness of online and face-to-face training

Annette Mortensen¹ Sue Lim²
(sue.lim@waitematadhb.govt.nz)
¹Programme Manager, Asian, Migrant and Refugee Health Action Plan, Northern Regional Alliance
²Operations Manager, Asian Health Support Services, Waitemata DHB

Abstract
Asian, Middle Eastern, Latin American and African (MELAA) peoples are a quarter of the Auckland region population. Since 2010, 10,000 health practitioners in the Auckland region have enrolled in the accredited Cultural and Linguistic Diversity (CALD) cultural competency training programme developed by Waitemata District Health Board (WDHB) Asian Health Support Service (AHSS). The training is part of the regional programme of work for the Asian, Migrant and Refugee Health Action Plan administered by the Northern Regional Alliance (NRA) on behalf of Waitemata, Auckland and Counties Manukau District Health Boards.

In total, WDHB, Asian Health Support Services has developed nine flexible learning options including face-to-face and web-based, self-paced learning courses which are accredited for Continuing Medical Education (CME) and Continuing Nursing Education (CNE) points. These courses are tailored to a range of clinical specialities and settings.

The purpose of this paper is to present the findings of an evaluation conducted in 2011 of the first module of the CALD cultural competency training programme titled “CALD 1: Culture and Cultural Competency”. The purpose of the evaluation was to measure the effectiveness of the content and of training delivery in terms of improving practitioner cultural awareness, knowledge and skills. The majority of the evaluation study participants were female nurses who identified as New Zealanders or as Other European. The findings of the evaluation demonstrate attitude and behaviour change in participating health practitioners in the Auckland region.

Introduction
Changing demography in the Auckland region
Culturally and Linguistically Diverse (CALD) group cultural competence training for the health and disability workforce has been developed in response to ethnic super diversity in Auckland region health populations (Statistics New Zealand (SNZ), 2006; 2009; 2012). Census 2013 demographic data shows that a quarter of the Auckland region’s population are from an Asian or Middle Eastern, Latin American or African backgrounds (Gomez, King & Jackson, 2014). Populations from Asian, migrant and refugee backgrounds represent a wide range of ethnic, religious, cultural and linguistic diversity in the Auckland region (Gala 2008; Mortensen, 2009; Perumal, 2010; SNZ, 2009).

Culturally diverse populations under-utilise New Zealand health and disability services and cultural and linguistic barriers are cited as the reason (AHSS, 2010; Gray, 2007; North & Lovell, 2002; Royal New Zealand College of General Practitioners, 2007). New Zealand health studies tell us that CALD groups have:

- disparities in health status compared to national groups even when adjusted for income and health conditions (Gala, 2008; Scragg, 2010)
- barriers to accessing services because the health workforce is not aware of the nuances of cultural difference (WDHB Child, Women and Family Services, 2011)
- under-utilisation of health and disability services that are available (Perumal, 2010)
As well, the health workforce in the Auckland region is diverse (Badkar & Tuya, 2010; Immigration New Zealand (INZ), 2011) and may be culturally different from the patient groups served. Every day health services encounter increased cross-cultural interactions between CALD patients and clinicians and between employers and employees.

International studies demonstrate the effectiveness of CALD cultural competency training for healthcare providers in reducing disparities between ethnic minority groups and other populations (Brach & Fraser, 2000; Doorenbos, Schim, Benkert & Borse, 2005; Escallier, Fullerton & Messina, 2011; Schim, Doorenbos, Benkert & Miller, 2007). However, previously there have been no New Zealand studies of the post-test effectiveness of cultural competence training for the health and disability workforce.

**Background**
CALD cultural competency training has been available from April 2010 and since that time there have been more than 10,000 CALD course enrolments from health practitioners in the Auckland region. An average of 180 learners per month take up face to face and e-learning CALD courses. The need to meet the cultural competence requirement of Health Practitioners Competence Assurance Act 2003 has been a major incentive for practitioners to complete the CALD training. The aims of the CALD training programme are to:

1. Increase the health workforce's level of consciousness and confidence to work with CALD patients and their families.
2. Enhance the cross-cultural interactions in the long term.
3. Increase CALD patients’ satisfaction with the services delivered.
4. Reduce miscommunication, misdiagnosis, non-compliance with treatment and follow up, and disengagement with health service providers.

**CALD Cultural Competency Training**
The Waitemata District Health Board (WDHB) Asian Health Support Service (AHSS) has produced a suite of accredited CALD cultural competence face to face and e-learning courses for health practitioners working with CALD patients and their families. The CALD resources include (a) a suite of face to face and e-learning Continuing Medical Education (CME) and Continuing Nursing Education (CNE) accredited CALD courses for developing cultural competency; (b) a range of online CALD cultural competency toolkits; (c) an online CALD culture and language service directory; (e) translated health information (f) a CALD online forum and (g) a regular CALD Newsletter. These courses and resources are all easily accessible from a single web portal: http://www.caldresources.org.nz.

The overall goal of the CALD training programme is to improve the cultural awareness, sensitivity, knowledge and skills of nurses and other health practitioners working with CALD patients and their families. The CALD Cultural Competency Training Programme includes:

1. Culture and Cultural Competency (e-learning and face-to-face courses)
2. Working with migrant (Asian) patients (e-learning and face-to-face courses)
3. Working with refugee patients (e-learning and face-to-face courses)
4. Working with Interpreters (e-learning and face-to-face courses)
5. Working with Asian mental health clients (face-to-face courses only)
6. Working with Refugee mental health clients (face-to-face courses only) - this has been replaced by the newly developed CALD 9 online and face-to-face course
7. Working with Religious Diversity (e-learning and face-to-face courses)
8. Working with CALD families - Disability Awareness (e-learning and face-to-face courses)
9. Working in mental health context with CALD clients (e-learning and face-to-face courses)

Additionally, a range of CALD resources including online toolkits and supplementary resources are produced to provide more culture-specific information to enhance the health workforce's cultural knowledge and skills.
Programme Design Concept and Principles
The design concept and principles for the development of the CALD modules includes evidence-based research on culture to inform the content development. Hofstede’s (2001) internationally recognised cultural dimensions model provides the theoretical framework for understanding differences in values between diverse cultural groups. The approach to the training resources and to workshop design is pedagogically robust incorporating aspects of theoretical, experiential and reflective knowledge to introduce and to reinforce participant learning. An evidence-based evaluation framework Phillip’s (1996) five-level Return-on-Investment (ROI) model is used to gauge learning uptake and impact. The online learning modules use videoed case scenarios to demonstrate culturally safe practice to learners. The learning experience includes: interactive exercises; quizzes and case studies to enhance participant understanding. In terms of learning opportunities there is parity between the face-to-face workshops and e-learning approaches and learners can opt to take one or other or both options. The e-learning courses are interactive, dynamic and offer opportunities for self-reflective learning to keep it interesting for e-learners. The design of the courses progresses the learner from the beginner stage (consciousness) to the novice (putting learned knowledge and skills into practice), to becoming an expert in cross-cultural interactions.

How are CALD learners supported?
The CALD Online Forum is available for learners to post questions to trainers and to share knowledge while they are doing the online study via the CALD website (http://www.caldresources.org.nz). Learners have access to CALD resources on the CALD website which provides information about relevant services and supports for CALD groups; downloadable translation information and regular CALD updates by newsletter. Learners also have access to New Zealand and international literature on culturally competent care for the CALD groups served in New Zealand via the CALD website.

Evaluation
Asian Health Support Services contracted an independent evaluator UniServices Ltd of the University of Auckland to evaluate the CALD 1: Culture and Cultural Competency, face-to-face and online training course (Auckland Uniservices, 2012). CALD 1 is the pre-requisite to all the subsequent courses described above.

Purpose
The purpose of the study was to evaluate the pre training and post training feedback from participants who had completed the face to face or online CALD 1 Culture and Cultural Competency course. The evaluation was designed to address the following questions:

1. What impact has the completion of CALD 1 had on participants’ cultural competence? More specifically, what has been the impact on the following aspects reflective of cultural competence?
   - Awareness
   - Sensitivity
   - Behaviour

2. What are participants’ views on the content and quality of the CALD programme? Do these differ as a function of the mode of delivery? (i.e. face to face versus on-line) The aspects explored pertaining to the programmes content and quality are:
   - Delivery of programme
   - Quality of materials
   - What aspects of the course were most helpful?

3. How has the course impacted on the participants’ practice?
Abstracts

**Methodology**
The methodology includes:

a. Independent evaluation of participants’ ratings (quantitative) and feedback (qualitative) about the CALD 1 Culture and Cultural competency course using pre and post questionnaire

b. Follow up telephone interviews for the period 1st March 2011 to 30th September 2011

**Results**
There were 249 participants in the study, of these 108 (65%) completed the post questionnaire. 78% of those completing the pre questionnaire were enrolled in the online version of the course. Approximately half of the participants had undertaken prior cultural competency training.

**Findings**
The findings from this evaluation show that, overall, completion of Module 1 of the CALD programme had a significant impact on participants’ cultural competence (Auckland Uniservices Ltd, 2012). That is there were significant increases in overall cultural competency scores following completion of the module. In particular, it appears that participation in CALD Module 1 positively impacted on those who had had previous cultural training by reinforcing or consolidating prior learning. Further, while attitudes among participants were generally positive, practitioners may not have known how to act on those attitudes, that is, they may not have the practical skills to match. However, by participating in CALD Module 1, they gained the behavioural skills needed to support positive attitudes, hence the observed significant positive change in behaviour.

These quantitative findings are supported by the qualitative findings. Increased positive behaviours and attitudes/sensitivity towards CALD patients were reported by participants. According to the qualitative data analysed, participants found that CALD Module 1 provided many useful aspects with respect to increasing their cultural competency and described various ways in which they had utilised learning in practice. They reported increased knowledge of cultural differences, including values, health beliefs, religious beliefs, gestures and customs, and better skills when interacting and communicating with CALD patients. They also described ways in which their awareness of and sensitivity towards CALD patients had been enhanced. Moreover, according to the qualitative evidence obtained, participants in CALD Module 1 reported a heightened awareness of their own culture and how their own cultural beliefs impacted on how they viewed other cultures different from their own.

Participants’ experience of CALD Module 1 was overwhelmingly positive. They reported high levels of satisfaction with the content, programme delivery and quality of resources. Considering all the data obtained for this evaluation, the CALD Module 1 achieved the aims of delivering a high quality, well designed, interactive, engaging, educational and self-reflective programme, with good quality video scenarios, offering mixed learning options, which enhance learning.

**Conclusion**
The development of CALD 1 Cultural Competency online courses is an important innovation aimed at improving the responsiveness of health services to the CALD populations served. It is the "first of its kind” available in New Zealand which facilitates health practitioners’ ability to increase cultural awareness, knowledge, sensitivity, skills and understandings of cross-cultural interactions. The development has enabled sustainable and flexible learning options for the Auckland region health workforce and the online training tools are easily expandable across New Zealand health workforces. The findings of the evaluation of the CALD cultural competency training programme provides evidence for the effectiveness and usefulness of the courses and of changes to participants’ attitude and behaviour change in practice.
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Understanding the mechanism by which Te Tiriti o Waitangi contributes to Māori health development

Papatūānuku Nahi¹
(Papa@hapai.co.nz)
¹Hapai Te Hauora, Auckland, New Zealand

Issue
Māori do not enjoy the same level of health as other ethnic groups in Aotearoa New Zealand, with ethnic inequalities between Māori and non-Māori the most consistent and compelling inequities in health. In response Māori have sought greater participation in politics and health development. Iwi have also played a part in health provision and wider holistic means of improving Māori health and wellbeing, some of this occurring following settlement of claims to the Waitangi Tribunal.

Aims
The aim of the research was to explore the mechanisms by which settlements of Te Tiriti o Waitangi contribute to Māori health development through an examination of the literature on the determinants of health combined with the perspectives of iwi leaders.

Methods/ action
This research was guided by a kaupapa Māori framework and used qualitative research methods. In-depth interviews were conducted with four iwi leaders. Thematic analysis of the interview data was performed using general inductive and saliency analysis.

Results/ achievements
Capabilities developed as a result of managing funds from settlements have increased iwi capabilities to address health and wellbeing for their members. Although it is early days for many since settlement, iwi development has in many cases had a positive effect on member housing, income, employment and education. Iwi are also involved in collaborations and partnerships for health including integrated service provision, region-wide health planning, iwi and Crown treaty partnerships and iwi collectives to advance iwi health. Iwi are also increasingly involved in monitoring and analysis, research and in strengthening identity. Hapū and iwi knowledge systems, the notion of mana motuhake and self-determination and certainly tupuna legacy provide iwi with an enduring conviction to provide for the wellbeing of the people they represent and to do so in strength-based ways.

Conclusions
Approaches to improve iwi health and well-being and reduce intergenerational health inequities that acknowledge iwi self-determination and leadership; the Crown’s role in protecting Māori health and that prioritises children and their whānau; whānau self-determination; fair employment; a healthy standard of living; healthy communities; appropriate and accessible ill-health prevention; and the protection and development of cultural taonga and resources will all likely enhance Māori health development and reduce health inequities for Māori. Notwithstanding, iwi involvement is only one mechanism for Māori health development. National and international indigenous rights and breaches of these rights validate a continuing and significant obligation for the Crown to protect Māori health, address the determinants of health and to restore health equity.

Implications
In a post-settlement environment, iwi self-determination and leadership have an increasingly important role to play in the advancement of Māori health. It is important for public health to take into account the role of hapū and iwi self-determination in Māori health development alongside the Crown’s responsibilities to address health inequities.
A Māori community voice on local alcohol policies

Papatūānuku Nahi¹, Anthony Thompson², Valerie Teraitua³, Ken Kerehoma⁴, Vikki Ham⁵ and Malina Parkinson²

(Papa@hapai.co.nz)
¹Hāpai Te Hauora
²Te Rūnanga o Ngāti Whātua
³Papatūānuku Kokiri Marae
⁴Odyssey House
⁵Auckland Regional Public Health Services

Issue
Despite significant harm associated with alcohol for many in Aotearoa New Zealand, a collective Māori voice on this issue is scarce. As a result The Waipiro Harm Action Group was formed and was influential in ensuring a Māori voice was heard during the development of a Local Alcohol Policy specifically for the Auckland region.

Aims
The aim of this group was to build awareness of alcohol related harm in the community, equip Māori community leaders with the skills and knowledge to participate in and influence alcohol policy development and support communities to take action.

Action
In the lead up to the development of a local alcohol policy for the Auckland region, the Waipiro Harm Action Group was formed. Group members set about supporting communities to take action, get involved in and have a say on the development of the local alcohol policy. Activities included supporting youth facilitated video interviews with other youth, supporting marae leaders to have a voice on the sale and supply of alcohol in their respective areas and equipping Māori communities in general with the skills to have a voice on the issue.

Achievements
A variety of things emerged as a result of this group including an increase in youth health leadership, the validation of marae leaders as health champions, the development of creative ways to participate in health decision-making and the formation of a collective Māori voice on alcohol.

Conclusion
Māori communities face challenges to participating in submission processes and policy-making. Extensive support such as that provided by a collective group may equip them with the tools and knowledge to take action.
Getting more bang for your health buck: How cost-effectiveness research can help

Nisha Nair1, Tony Blakely1, Nick Wilson1, BODE3 team1  
(nisha.nair@otago.ac.nz)  
1Burden of Disease Epidemiology, Equity, and Cost-Effectiveness Programme (BODE3), University of Otago, Wellington, New Zealand

Issue
Deciding how best to spend limited health dollars is challenging for decision-makers at any level. How do you choose what to spend money on (and what not to spend money on) when everything seems important? Robust cost-effectiveness research is one tool in the decision-making toolbox.

Aims
The BODE3 research programme aims to provide decision-makers in health with cost-effectiveness information that can help inform how they allocate limited resources. We take any one health ‘intervention’ and investigate its costs, effects, and cost-effectiveness.

Methods/ action
We use disease and economic modelling to evaluate health interventions. New Zealand data is used to populate these models. The models allow for uncertainty (due to lack of perfect knowledge), for genuine variation (say by age, sex, or ethnicity), and can test different ‘what-if’ scenarios. For a given intervention, the models provide estimates of costs (health system costs), effects (health gains and inequality impact), and cost-effectiveness.

Results/ achievements
To date, we have investigated the cost-effectiveness of a range of health interventions: from tobacco taxes and cancer care coordinators to HPV vaccination and salt reduction strategies. Selected results are being presented today. We disseminate results through a range of avenues, with the aim of making what is often complex research accessible and interesting.

Conclusions
The importance of considering cost-effectiveness is generally accepted, but the practicalities are tricky: there is sparse local information, substantial uncertainty, and it can be complex. The rationale behind BODE3 is to try and fill this gap using NZ data, rigorous methods, and investing in research translation.

Implications
Deciding how best to spend limited health dollars is difficult. It will only continue to become more challenging as the population ages, chronic conditions become more common, new health technologies become available, and public expectations rise. If value-for-money is the goal, then cost-effectiveness research helps make both the value and the money more palpable for the decision-maker.
Patently obvious: A public health analysis of pharmaceutical industry statements on the Trans Pacific Partnership International Trade Agreement

Pat Neuwelt¹, Briar Mannering², Deborah Gleeson³
(briar.manner@gmail.com)
¹Te Kupenga Hauora Māori, School of Population Health, University of Auckland
²The University of Auckland
³School of Public Health and Human Biosciences, La Trobe University

Issue
The Trans Pacific Partnership Agreement (TPPA) is a large regional trade agreement being negotiated by twelve countries, including New Zealand (NZ) and the United States of America (US). The patent-holding pharmaceutical industry (the Industry) has lobbied hard for enhanced intellectual property protections and rules affecting pharmaceutical pricing and reimbursement schemes in the TPPA. These provisions would likely impact public health by reducing access to affordable medicines.

Aim
The purpose of the study was to inform public health advocacy by exploring how the Industry has used language to frame the TPPA, in order to influence opinion and exert leverage.

Methods
Drawing on a framework for critical policy analysis, we undertook a thematic analysis of the language used in publicly available statements about the TPPA from the Industry's US and NZ peak bodies. Data included press releases, submissions and other statements, dated 2008-2013.

Results
The Industry framed the TPPA as contributing to the public good. The TPPA was portrayed as redressing inequitable pharmaceutical management policies, which limit people's access to new medicines. Further, the TPPA was constructed as the route to economic growth for the USA, and ultimately for all TPPA countries, through increased intellectual property protection for the patent-holding pharmaceutical industry.

Conclusions
This framing obscured the inherent tensions between the interests of the Industry and public health goals. The Industry remained silent on the issue of affordability, a key dimension of equitable pharmaceutical access. The use of rhetoric, such as 'win-win outcomes' (for TPPA countries and the Industry), hid the vested economic interests of the Industry in the TPPA.

Implications
- Language used by corporations engenders sympathy and support from clinicians, policymakers, and politicians
- Thematic analysis is valuable for exploring industry ideology
- Understanding the Industry's framing of issues can assist public health advocates in challenging prevailing discourses and exposing vested interests.
Improving rheumatic fever surveillance in New Zealand:
Results of a surveillance sector review

Jane Oliver¹, Nevil Pierse¹, Michael Baker¹
(olija865@student.otago.ac.nz)
¹Department of Public Health, University of Otago, Wellington, New Zealand

Issue
The New Zealand (NZ) Government has made a strong commitment to reduce the incidence of rheumatic fever (RF) by two thirds, to 1.4 cases per 100,000, by mid-2017. Despite this, it is unclear what the current true incidence of RF is, due to major flaws affecting every major relevant surveillance system operating on a national scale.

Aims
We reviewed the NZ RF surveillance sector, aiming to identify potential improvements which would support optimal RF control and prevention activities.

Methods
This review used a recently developed surveillance sector review method. Interviews with 36 key informants were used to describe the sector, assess it and identify its gaps. Priorities for improvement and implementation strategies were determined following discussion with these key informants, with policy advisors and within the research team.

Results
Key improvements identified, included the need for a comprehensive RF surveillance strategy, integrated reporting and an online national RF register. At a managerial level this review provided evidence for system change and built support across the surveillance sector.

Conclusions
The surveillance sector review approach can be added to the small set of tools currently available for developing and evaluating surveillance systems. This new approach is likely to prove useful as we confront the challenges of combating new emerging infectious diseases, responding to global environmental changes, and reducing health inequalities.

Implications
A comprehensive RF surveillance strategy should be developed in order to communicate and coordinate improvements. A tangible way to begin integrating surveillance activities would be to implement a periodic, national RF surveillance report based on data compiled by a national rheumatic fever register.

For more information:
Health and well-being inequities among students experiencing poverty and living in affluent neighbourhoods or attending high decile schools

Simon Denny¹, Sonya Lewycka², Pat Bullen³, Terryann Clark⁴, Theresa Fleming¹, Roshini Peiris-John⁵, Fiona Rossen⁶, Jane Sheridan⁶, Tasileta Teevale⁷, Jennifer Utter⁵ (s.denny@auckland.ac.nz)

¹Department of Paediatrics: Child and Youth Health, University of Auckland ²Growing Up in New Zealand. University of Auckland ³School of Learning Development and Professional Practice. University of Auckland ⁴School of Nursing. University of Auckland ⁵Section of Epidemiology and Biostatistics, University of Auckland ⁶Centre for Addiction Research. University of Auckland ⁷Pacific Development. University of Otago

Issue
Poverty is a major determinant of illness, disability and death in New Zealand. Poverty also impacts on the wellbeing of children and adolescents through a number of pathways, especially through the stress and anxiety experienced by families trying to ‘make ends meet’. Recently it has been argued that inequalities in wealth also contribute to ill-health and poor social outcomes.

Aims
The aims of this study were to analyse the health outcomes of students experiencing poverty and to determine how the relationship between household poverty and neighbourhood deprivation influences health.

Methods/action
Data were from Youth12; a nationally representative sample of 8500 secondary schools students who participated in a national youth health survey in 2012. Latent class analyses were used to group students based on eight indicators of socioeconomic deprivation: no car, no phone, no computer, their parents worry sometimes or often about not having enough money for food, more than two people sharing a bedroom, no holidays with their families, moving home more than twice that year and garages or living rooms used as bedrooms. Multilevel generalised linear models were then used to estimate the cross-level interaction between individual poverty and area deprivation (based on Mesh Blocks using Census data and school decile) on depression symptoms, cigarette smoking and obesity.

Results/achievements
Three groups of students were identified; 81% of students had low levels of poverty across all indicators, 15% experienced moderate poverty and 4% experienced high levels of poverty. Depression, cigarette smoking and obesity were 2-3 times higher in the poverty groups compared to students’ not experiencing poverty. Students experiencing poverty and living in affluent neighbourhoods reported higher levels of depression and higher rates of cigarette smoking than students experiencing poverty and living in low socioeconomic neighbourhoods. Similar results were found for students experiencing poverty and attending high-decile schools.

Conclusions
Inequities in wealth exacerbate the effects of poverty for students experiencing poverty in New Zealand

Implications
National policies that lessen the disparities and inequities in wealth are needed alongside efforts to lessen socioeconomic segregation between neighbourhoods and between schools.
Ola Lei Conceptual Framework– The traditional context of ‘living well’ in Tuvalu

Tufoua Panapa¹
(tpan026@aucklanduni.ac.nz)
¹Centre for Development Studies, University of Auckland, Auckland, New Zealand

Issue
Ola lei is the conventional translation used in Tuvalu for the English word ‘health’. However, officially the Tuvalu Department of Health uses the World Health Organisation (WHO) definition of health. There is a need for the Department of Health to understand and consider how community people understand health and living well, in order to deliver effective health services and programs.

Aim
The aim of this work is to document and discuss community people's understanding of ola lei, through the Ola Lei Conceptual Framework.

Methods
Community people (including health professionals, teachers, students, traditional healers, government and NGO officials, church leaders, community leaders and elders, and women and men) on Funafuti and Vaitupu Islands were interviewed about ola lei. The patterns of ideas voiced by the interviewees with reference to their personal experiences, age, and status in family and community were analysed. Participant observation was also undertaken in schools, a few families' households, at communal activities and festivities, and in hospitals.

Results
Ola lei is inherently broad and complex and covers many aspects of Tuvaluan life. This means that while ola lei shares with the WHO definition of health a holistic perspective, it also differs significantly. Ola lei does not just concentrate on the physical, mental and social wellbeing of individuals, but integrates a range of aspects relating to both physical health and the broader environment. Ola lei goes beyond the individual and extends to the family, community and nation as a whole. As a result of my analysis of the views and practices of research participants, the Ola Lei Conceptual Framework – visualised as an octopus – was synthesised.

Conclusions
The Ola Lei Conceptual Framework is an outline that symbolises how Tuvaluans view health. Hence, it can be used to address health issues and problems, such as prevalence of diabetes, in Tuvalu.

Implications
Key policy implications include: local worldviews such as the Ola Lei Conceptual Framework need to be considered and included in health strategic plans and policies.
A culturally appropriate methodology to recruit participants of Asian ethnicity: A feasibility study

Sherly Parackal¹
(s.parackal@auckland.ac.nz)
¹Auckland University, Auckland, New Zealand

Issue
People of Chinese and Indian ethnicities are the largest Asian subgroups in New Zealand (NZ) and it is projected that by 2026, 15% of the NZ population will be people of Asian ethnicity, a figure similar to that projected for the Māori population but surpassing that projected for the Pacific population in NZ (Statistics New Zealand, 2010). Evidence indicates that the healthy migrant status (HMS) of new migrants due to selection mitigates as the duration of residence increases (Harding, 2003). Research has indicated an elevated risk for type 2 diabetes and coronary heart disease among South Asian (Kanya, et al, 2010; Misra, et al, 2010; Scragg, 2010); and cancers among Chinese (Hanley, Choy, & Holowaty, 1995; Virk, Gill, Yoshida, Radley, & Salih, 2010), more so among second generation migrants (Edwards, Murphy, & Feltbower, 2006; Smith, Kelly, & Nazroo, 2012). Disparities in health between Asian subgroups have also been reported (Sheth, Nair, Nargundkar, Anand, & Yusuf, 1999). However, very few studies have investigated the reasons for the loss of the HMS among Asian migrants and the disproportionate distribution of diet related disease prevalence within Asian subgroups. Methodological challenges such as poor sample size are a bottleneck of such investigations. Studies on migration and health in New Zealand (Abbott, Wong, Williams, Au, & Young, 2000; North, Trlin, & Henderson, 2004) have had very poor response rates, which limit the usefulness of the findings of the study. In addition, Asian peoples are often under-represented in large scale health surveys, which limit generalising the findings of ethnic specific analyses (Parackal, Smith, & Parnell, 2014). In response to the issues raised, the Prolonging the Healthy Migrant Status (PHMS) project was developed. This project was a scoping exercise and had three objectives, one of which was to develop a culturally appropriate survey methodology.

Aims
The aims of the PHMS were to 1) identify factors associated with diet related non-communicable disease (NCDs) in Chinese and Indian immigrants in New Zealand 2) develop a survey tool to investigate the factors that impact on the health of Chinese and Indian migrants with a particular focus on NCDs 3) develop a culturally appropriate methodology to increase response rate of Asian health research.

Methods
Secondary analysis was conducted on 03/04 and 06/07 NZ Health Survey datasets (social factors) and the 08/09 Adult National Nutrition survey (dietary factors) to achieve the first objective. Gaps identified from the secondary analyses of the 03/04 and 06/07 NZ Health survey datasets (social factors) and the 08/09 Adult National Nutrition survey (dietary factors), adapted questions from China Nutrition and Health Survey and the Demographic Health Survey contributed to developing the PHMS survey tool. Chinese and Indian sounding surnames were extracted from the Auckland white pages and a multilingual (Chinese/English or Hindi/English) letter outlining the purpose of the study was mailed out to 1017 addresses (Chinese = 507; Indian = 510). After one week, trained multilingual interviewers telephoned potential participants to recruit them to participate in the Migrant Health pilot study.Respondents were given the option of participating via a self-completion questionnaire or a face to face interview either in English or Chinese dialects or Hindi.
Results
The PHMS questionnaire developed had six sections namely 1) nutrition 2) physical activity 3) health status 4) living standard measures 5) health care access and 6) demographics. The methodology developed to increase response rate of Asian health research proved to be effective in recruiting 40% of those eligible. Using Chinese and Indian sounding surnames enabled correctly identifying the ethnicity of 76% of those contacted. The majority of participants chose to participate via a self-completion questionnaire. Nearly all Indians chose to participate in “English”. In contrast 81% of Chinese participants chose to participate in “Chinese”.

Conclusions
The methodology developed seems feasible to recruit participants of Asian ethnicity for health research. Providing an incentive for participation is likely to increase this response rate further.

Implications
The loss of quality of life of migrants and the economic cost due to early loss of HMS has implications both at an individual and societal level. Hence investigating the reasons for and the pace at which the HMS declines among migrant subgroups is imperative to develop and implement interventions using a public health approach.

References


Rethink your drink: Implementing a sugar-free drink policy at a large-scale Auckland event

Malina Parkinson¹, Papatūānuku Nahi²
(papa.nahi@hapai.co.nz)
¹Te Rūnanga O Ngāti Whātua, Auckland, New Zealand
²Hapai Te Hauora, Auckland, New Zealand

Issue
Consumption of sugar sweetened beverages has been linked with poor health including obesity, type 2 diabetes, tooth decay, gout and other risk factors for cardiovascular disease.

Aims
The aims of this project were to increase awareness of the amount of sugar in sugar sweetened beverages amongst attendees and food stallholders at the ASB Polyfest; to reduce availability of sugar sweetened beverages; and to implement a healthy food and drink policy at the event. We also aimed to collect attendee feedback on the availability of sugar sweetened beverages at venues and events in the Auckland region.

Methods/actions
In 2012 Te Rūnanga o Ngāti Whatua and Hāpai Te Hauora worked with the event’s organisers to implement a healthy food policy for one stage area of the event. In 2013 this policy was extended to include a sugar-free drinks policy, information and awareness raising for attendees and stallholders. Leading up to the event Te Rūnanga o Ngāti Whatua and Hāpai Te Hauora worked with stallholders to inform them of sugar-free drink options. As a result stallholders were willing to support the healthy drinks policy. During the event, only sugar-free drink options were available at the Māori stage area. Alongside this, 6,000 litres of free water was supplied to attendees.

Results/achievements
As a result of this project, there was an increase in awareness amongst attendees and food stallholders of the content of sugar sweetened beverages. Food stallholders complied with the healthy drink policy. What’s more, the event organisers took ownership of the policy and in many instances monitored the implementation of the policy amongst stallholders. The event organisers have now committed to an event-wide healthy food and drink policy in the future.

Conclusions
This project adds to the momentum developing around food and drink public health interventions. Although at times challenging, with perseverance it is possible to implement healthy food and drink policies and have buy-in for these at large-scale events.
An audit of the Toi Tu Kids Service: Tamaiti Tu, Tamaiti Ora -
The child that expresses strength is a well-child

Jo Peterson¹, Priscilla Williams¹, Ngāti Kahu
(jop@tehononga.org.nz)
¹Te Hononga o Tamaki me Hoturoa Otahuhu, Auckland

Issue
The inequalities in health and social outcomes for Māori and Pacific children are worryingly high in New Zealand. The Toi Tu Kids Service (TTKS) aims to reduce these inequalities and supports children and their whānau by providing a bridge between community, primary care and hospital services to improve access to care.

Aim
To conduct a two-year retrospective audit of the TTKS focusing on the demographic of children and families seen, types of conditions managed and to identify if the service reduces hospitalisations and ‘did not attend’ (DNA) rates.

Methods
The Toi Tu Kids Service targets Māori, Pacific and high needs families who may be struggling with attending appointments, managing a child’s health or behavioural condition, navigating the health system and requiring other social supports. The team includes a partnership between Te Hononga nurse practitioner, Whānau support worker and two paediatricians from Starship Children’s Hospital. We conducted an audit of children seen by our service from 2012-2013, looking at hospital data around admission and DNA rates as well as examining more closely the complexity of the needs of the children and families we saw.

Results
247 children and their whānau were referred to and seen by the team in a two year period. A large proportion of the children referred had other issues such as poverty, violence, parental mental health issues and other complicated health and social needs. The nurse practitioner was able to manage one third of the referrals and therefore the patient did not require a hospital appointment but instead was managed at home. A sub group analysis of enrolled Māori and Pasifika children (n=111) was completed, thirty-eight had in the past had a high number of presentations to the hospital for avoidable issues and thirty-nine had multiple previous missed hospital appointments. Since being enrolled in the service five children have represented to the hospital for a similar condition and four have not attended an organised hospital outpatient appointment. In terms of whānau ora outcomes we have supported a large number of families with advocacy and support around, housing, financial and personal issues such as family violence.

Conclusions
Our audit indicates that this unique collaborative model of service was able to support families with complex care needs. Importantly we found a third of referrals to the TTKS could be managed in the community and the support reduced representations and missed appointments in secondary care.

Implications
The results of the audit have huge implications for the families but also for potential cost savings for the DHB and other health services. We hope that the model will be adopted by other DHBs who will also see the benefit for children, whānau and communities.

Toi Tu Kids Service
“Our vision is all children reaching their potential and participating fully in life by removing barriers and building healthy whānau and communities”
Toi Tu Kids Service Model of Care

This model demonstrates the unique partnership model of the Toi Tu Kids Service (TTKS) team with the Nurse Practitioner, Toi Tu Paediatricians and Whānau Support Worker. It then identifies six key fundamental delivery components that shape the care provided. Finally the outer ring displays the reciprocal interface the service has with the referrers and stakeholders to improve access and reduce inequalities.

Service Description
The service targets Māori, Pacific and high needs families who may be struggling with attending appointments, managing a child’s health or behavioural condition, navigating the health system and requiring other social supports. The team applies a Whānau Ora approach taking a broad view of the family’s health and other needs. The service has strong links with primary care providers and aims to be a bridge between secondary and tertiary services. The service will see referrals for conditions that can be easily managed in the community by the Nurse Practitioner and Whānau Support Worker with the clinical support of two Paediatricians.
MANA KIDS: School communities as a focus for a new nurse-led model of care

Elizabeth Pillay¹
(Elizabeth.pillay@middlemore.co.nz)
¹National Hauora Coalition, Counties Manukau Health Auckland, New Zealand

Issue
Acute Rheumatic fever (ARF) and Rheumatic Heart Disease disproportionately affects Māori and Pacific children in New Zealand. ARF results from an autoimmune response following a group A streptococcal throat infection. Overcrowding, poverty and poor health literacy are key drivers to this condition. Nurse-led clinics provide preventive services, early identification of health issues, interventions, and referrals that foster health and educational success.

Aims
Mana Kidz, a school based health service within Counties Manukau, provides a platform to meet the needs of those at risk of rheumatic fever. This collaborative integrated model of care illustrates an opportunity to use a Primary Care approach to improving population health. As the school is an effective setting for health promotion, health services provided will contribute towards the reduction in rates of ARF as well as other child health issues such as skin infections.

Methods/actions
Our experiences show that building meaningful relationships with the school community are critical to the success of school based programs. Health services are delivered in low decile Primary and Intermediate schools five days a week by Registered Nurses and Whānau Support Workers. Barriers to the diagnosis, prevention and treatment of sore throats as well as other child health issues such as skin infections are addressed. Standing orders provides a safe and effective means of improving and increasing access to primary care. Impacts of the wider determinants of health such as poverty and housing are addressed through nursing advocacy and education. Staff training, robust clinical tools and support is essential to the delivery of a safe and effective nurse-led service. The development of training packages and resources has been an interesting journey. We were committed to ensuring that this contributes towards quality of service.

Result/achievements
Mana Kidz was deployed across sixty-one schools in less than nine months through a formal Alliance that engaged twelve Providers including NGOs, the DHB and PHOs. This programme is now showing measurable impact on the wellbeing of high needs children. Key challenges we face are medication adherence and a transient population. Innovative strategies are implemented to help overcome these.

Conclusion
Nurse led clinics provide benefits not only to the community but also to health service systems and funding bodies.

Implications
Consideration for suitable funding that includes a career pathway for both nurses and Whānau Support Workers is necessary. A national level policy on nurse-led school health centres would be a worthwhile investment.
TeleDOT: Using technology for sustainable directly observed therapy for tuberculosis

Cathy Pikholz¹, Carolyn Pye¹
(cathyp@adhb.govt.nz), (cpye@adhb.govt.nz)
¹Health Protection Team, Auckland Regional Public Health Service, Auckland, New Zealand

Issue
The World Health Organization recommends that the optimal dosing frequency for people with tuberculosis (TB) is daily dosing throughout the course of treatment, or alternatively daily dosing during the intensive phase (the first eight weeks) of treatment followed by three times weekly dosing by directly observed therapy (DOT) for the remainder of treatment. Daily dosing does not always have to be provided by daily DOT – some people can self-administer their drugs with education, regular review and supervision. However the increasing evidence for, and recommendations to use daily dosing, is likely to result in more people requiring daily DOT, for example people who are unlikely to adhere to treatment and people with side effects who require closer monitoring. Auckland Regional Public Health Service (ARPHS) is responsible for TB treatment supervision, including DOT, in the greater Auckland region.

Aims
The aim of the TeleDOT project was to increase the number of ARPHS’ TB clients able to be treated with DOT within current ARPHS staffing levels by taking a client-centred approach to using new technology.

Methods/actions
In late 2012, Auckland Regional Public Health Service (ARPHS) successfully bid for one of two Foundation Projects under Auckland District Health Board’s (ADHB’s) Telehealth Strategy. The Foundation Project aimed to enrol two clients in the initial phase of the TeleDOT roll out, with the overall goal of ten clients being monitoring remotely for DOT. Eligible TB clients who could benefit from TeleDOT entered into formal agreements to participate in a pilot project during 2013. Formative and summative evaluations of the ARPHS Foundation Project were completed, using a variety of methods to capture qualitative and quantitative data, including staff, client and stakeholder surveys. From December 2013 at the end of the Foundation Project, TeleDOT was transitioned to business as usual alongside traditional face to face DOT, with the aim of delivering TeleDOT to at least ten clients by June 2014. The technology progressed from initially using video telephones to using software applications downloaded onto clients’ personal computers or mobile devices.

Results/achievements
TeleDOT proved an effective and efficient means of providing DOT to clients who are reliable, have some confidence using IT equipment and are already established and medically stable on DOT treatment. The Foundation Project achieved a 10% increase in the number of clients receiving DOT within existing staffing resources and demonstrated the potential for future expansion of DOT. Since transition to business as usual, TeleDOT has been increasingly well accepted by staff and clients and will continue to be an integral part of ARPHS’ TB medicine delivery mechanisms.

Conclusions
The TeleDOT project has demonstrated the potential for technology to improve treatment delivery to TB clients and achieve sustainable cost and other resource efficiencies for ARPHS.

Implications
Emerging technologies can improve service delivery models while achieving positive outcomes for clients and the public health workforce. The need to continuously improve the quality of client care within the context of a challenging economic environment will drive the adoption of new technologies.
Planning for healthy environments – The interface between public health and environmental planning in New Zealand

Namouta Poutasi¹, Catherine Poutasi¹, and Keriata Stuart²
(namouta@ipro.org.nz)
¹Integrity Professionals Limited
²Public Health Association of New Zealand, Wellington, New Zealand

Issue
The urban environment in which people live, work, learn and play influences decisions made and directly affects health outcomes. Poor urban form can include: a lack of access to public transport and facilities; unhealthy air, water, and soil; ineffective waste disposal; and lack of community cohesion. These contribute to obesity, diabetes and other chronic conditions, as well as to poor mental wellbeing. Research and experience has found opportunities for incorporating health into planning and ways this can be achieved. So why are cities often not planned and designed to promote good health? And how can both the public health and planning sectors change to ensure this happens?

Aims
The aims of this research were to:
1 investigate the relationship between the environment and health in New Zealand;
2 determine what makes a healthy environment;
3 identify critical issues, challenges and gaps in realising positive health outcomes through urban design and vice versa;
4 identify existing innovative initiatives between public health and urban planning to promote healthy environments; and
5 highlight factors for success, opportunities, and barriers to planning for healthy environments.

Methods/action
An initial literature review was undertaken, using material from New Zealand and overseas, which defined the term ‘healthy environment’ and confirmed the importance of urban form and design to healthy lives. The review summarised the overlapping interests of public health and urban planning and identified key barriers and opportunities. Stage two will build on these findings with key practitioner national interviews, and will explore local case studies of healthy environment initiatives. Factors that made these cases successful will also be examined and analysed.

Results
Literature on healthy environments comes from two different perspectives - health and planning (urban and environmental). Both highlight the critical need for health and planning sectors to work more collaboratively to plan for, fund and build healthier environments. There is a perceived lack of incentives for planners to encourage and provide healthy environments nationally and internationally, however opportunities through urban development and the statutory planning process were noted.

Conclusions
The first objective of the brief literature review was to explore the relationship between urban form and health outcomes. Significant evidence was outlined that illustrated the direct link between the environment and/or urban planning with positive or negative health consequences. Health models of particular note that show this relationship include the WHO Social Determinants, the Te Pae Mahutonga (Southern Cross Star Constellation) and the Fonofale Models. The main relationship can be summarised as ‘when environments change, disease rates change’. There are two sides to the relationship: 1) how environmental (particularly urban) planning affects health, and 2) how health affects the environment. This investigation used the term
‘healthy environments’ as opposed to ‘healthy urban planning’ or ‘healthy cities’ to include the rural setting and also to recognise that the relationship is not just one way with urban planning affecting health, but that health also affects the environment. This can be seen through urban regeneration examples and the effects and demands of an aging population – such as ‘wanting to age in place’, demand on social infrastructure, and access through public transport.

What makes a healthy environment? There is no ‘one size fits all’ in designing communities. Planning and designing of cities/towns should be tailored to their population’s local needs and characteristics. However, key elements summarised by national and international authors include:

- Equity of access to healthy environments, public spaces, infrastructure and health services. This includes equitable and sustainable access to housing, clean air, soil, water and basic needs.
- Urban design including access to public transport.
- Māori, community and stakeholder communication and engagement.
- Intersectoral action; led by proactive political leaders and cooperative alliances.
- A diverse innovative economy.
- Community cohesion.

How to incorporate health into urban planning and vice versa? Key agreed approaches and mechanisms to incorporate health in urban planning are through continuous dialogue between sectors; intersectoral action and cooperation; Health Impact Assessment (HIA); community driven planning; seconding public health professionals to relevant local, regional and central government agencies; ensuring health goals are included in any urban planning documents; and ensuring training is undertaken.

Key approaches and mechanisms summarised in national literature to incorporate planning in health are predominantly through influencing government health agencies to support the development of healthy infrastructure and other features of urban form that promote positive health outcomes for all populations, in order to build explicit consideration of human health into environmental standards, regulations and initiatives and explicitly acknowledge the health impact of environmental plans in the health system.

The critical barriers and challenges in realising positive health outcomes through urban design and vice versa identified in literature included:

1. limited resources; language barriers – each sector uses a different language; the disjointed sectoral activities; and lack of integrated services
2. the changing environment including the demographic changes cultural influences, technology and climate change
3. translating research evidence into policy and practice.

In order to address gaps, multi-layered opportunities were identified to improve existing conditions in New Zealand. These opportunities included:

1. a change of focus - recognition of the importance of both health and urban planning in creating healthy environments given the changing environment. Both health and planning sectors learning more about each other through secondment and training
2. integration of policy planning, and implementation through leadership and health being incorporated into development and urban design.
In summary, given the dynamic demographic changes, advances in technology and climate change, it is becoming increasingly critical that the health and planning sectors work together to increase dialogue, collaborate, integrate, promote intersectoral action and expand the remits currently operated in to enable change. Prioritising each other’s respective fields will also help create healthier environments; however change is unlikely to occur without strong political leadership. In fact international and national literature demonstrates that while there are some current good practice initiatives underway to incorporate health in urban planning - this is not the norm. Both sectors have a responsibility to develop and/or promote healthy environments and improve health outcomes.

Further work is needed to:

• understand the direct relationship between urban planning and health in New Zealand and between New Zealand and Australia through a longitudinal study, which would examine internal migrant effects such moving from a rural area to an urban area, from a low socioeconomic suburb to a better off environment, enabling more relevant and robust analysis of effects while controlling for other factors is required
• investigate the extent to which actions recommended in the literature have or have not been progressed, including interviews with authors, other key public health and planning practitioners - the Ministry of Health, Ministry for the Environment, Local Government (as required), and identifying additional or local factors not already discussed
• identify case studies on innovative New Zealand initiatives incorporating urban planning and health that have been undertaken to identify ways that best practice and lessons learnt from existing planned healthy environment initiatives can be shared
• raise the profile of the importance of focusing on healthy environments.
Medical students’ involvement in population health advocacy

Rennie Qin¹,²,³, Caroline Newson²,⁴
(rennie.qin@gmail.com)
¹University of Auckland, Auckland, New Zealand ²Medical Students for Global Awareness ³Generation Zero ⁴University of Otago, New Zealand

Issues
Health professionals have both the power and responsibility to advocate for key issues shaping the populations’ health. Advocacy is an important aspect of the work of health professionals. Many medical students want to do something on the issues shaping our health whilst still studying but feel that they lack the means. We see student years as an important time to build advocacy skills of medical students both as future health professionals and also as youth.

Aims
We aim to create a platform for medical students to learn about and engage in advocacy for population health issues

Methods/actions
The issues we advocate on are strongly driven by current population health priorities as well as interest of the students on a grassroots level. From time to time, we come together to agree on topics for advocacy across all medical schools to further cohesion and effectiveness. We advocate in partnership with other population health organisations. We empower medical students through training in advocacy skills and education sessions on population health issues. We advocate on issues through many tactics such as meeting members of parliament (MPs), writing submissions, signing petitions and writing letters. On top of advocacy, we also build awareness and encourage medical students to take direct action on population health issues.

Results/achievements
We have conducted advocacy campaigns on climate change, lignite mining, home insulation and Trans Pacific Partnership (TPPA) trade agreement over the past few years. Prior to the last general election (2011), we partnered up with OraTaiao to meet MPs on climate change and health across the country. Our petition on climate change to the minister of health received over five hundred signatures. We produced a comprehensive report on lignite mining and wrote over one hundred letters to MPs. We have made submissions on the Auckland unitary plan, Auckland low carbon plan, plain packaging, as well as home insulation and gambling in Dunedin. We are running a campaign on healthy housing in New Zealand leading up to this election (2014)We have mobilised many medical students in advocacy and there are now a lot more conversations on advocacy at medical school.

Conclusions
There is great potential for medical students to engage in population health advocacy.

Implications
Engagement of medical students in advocacy can facilitate involvement in advocacy throughout their future career as clinicians. Further work needs to be done in creating strong partnerships in advocacy with other population health organisations. There is also potential for integrating advocacy training into the medical curriculum.
Getting down to brass tacks: Values in governance at the interface between primary care and public health

Johanna Reidy¹
(Johanna.reidy@otago.ac.nz)
¹Department of Public Health, Wellington School of Medicine, University of Otago

Issue
Improvements in population health require primary care and public health to work more closely together. While authors have already discussed potential barriers and common areas of interest for primary care and public health (Bhopal, 1995a; Bhopal, 1995b), there is an implicit assumption from policy makers that because primary care and public health have overlapping services and similar populations of interest they will naturally work well together. However, this is not always the case, particularly when the two groups come together to govern a shared project.

Aims
This study aimed to explore the nature of governance and the overlap between primary care and public health by investigating how people on both sides experienced governance.

Methods
The study used grounded theory as a method of data collection and analysis in two phases. The first phase investigated patterns of governance activity in New Zealand through interviews with participants in all parts of the health system who worked in primary care and public health. In the second phase, New Zealand results were discussed with UK and Netherlands experts to make comparisons with other jurisdictions to see whether phase one findings were applicable beyond New Zealand.

Results
The research found that contrary to the implicit assumption of ‘common’ ground between the two areas, ‘contested’ ground is a more accurate description. Political and philosophical tensions over ethics, training, and approaches are played out in and around decisions about how a project is directed. On the surface these tensions are discussed in terms of evidence or expertise, yet are underpinned by concerns about ethics, politics and values. In turn, the conflicts about values are played out in discussions about how shared projects are steered.

Conclusions
The overlap between primary care and public health is more complex than simply a service overlap for shared populations. It is simultaneously a domain of service, a set of relationships, and a space where different value sets weigh against each other. However, government policy and professional training does not address this complexity, or necessarily provide resource and skills to help people negotiate when governing joint projects. This study highlights that the similarities between primary care and public health may have been overplayed, and the political and values based issues underplayed.

Implications
The research highlights that government policy for primary care/public health cooperation should be based on a more detailed understanding of the interface between primary care and public health, and the importance of framing it as a human experience as much as a service overlap.

References

Beyond the poster: Utilising an integrated digital media strategy to increase condom use among gay men in New Zealand

Joe Rich1, Trak Gray1
(joe.rich@nzaf.org.nz)
1New Zealand AIDS Foundation, Auckland, New Zealand

Issue
Human immunodeficiency virus (HIV) transmission in New Zealand is concentrated among gay and bisexual men. Although past HIV prevention efforts have kept HIV prevalence and incidence low compared to other countries, evidence suggests gay and bisexual men have rapidly adopted the Internet for sexual purposes: for health information, dating, cybersex, and pornography - creating new threats and opportunities. In response, the New Zealand AIDS Foundation (NZAF) identified the need to have an engaging presence online that would influence behaviour to prevent HIV transmission.

Aims
The aims were to engage gay and bisexual men across a wide range of digital media platforms to influence perceptions of condom use as a community norm, inspire conversations, increase consumption of sexual health education videos and increase orders of free condoms. The interventions had to achieve sustained long-term dialogue and be consistent with the existing Love Your Condom (LYC) social marketing programme.

Action
Digital resources were developed including sexually explicit ‘how-to’ videos, and video blogs that discuss frequently asked sex and sexuality questions. Resources were promoted through advertising on smartphone apps, websites, social media and Google search. Community members were also engaged through social media to add their voice to the movement by hash tagging a selfie that would then appear in a LYC advertisement. Independent and in-house evaluations assessed key indicators.

Achievements
Evaluation of the LYC programme showed very encouraging results across a range of key indicators, including online and social media:
- 81% prompted recall of LYC messages in online spaces
- A growing and engaged Facebook community of 16,000
- An average of 140,000 Facebook users reached and 4,600 engaged each week
- Facebook engagement rate reached an average of 3.3%, well above market average of 0.96%
- LYC educational videos have been viewed more than 2 million times over a 3-year period
- LYC appears to be contributing to an increase in condom use among gay and bisexual men. For each additional LYC message seen, the odds of using a condom with casual partners increases by 5% and with regular partners 3%.

Conclusions
NZAFs use of digital resources and online channels has effectively delivered community-based peer-driven HIV prevention messages to gay and bisexual men, contributing to an increase in condom use with both casual and regular partners.

Implications
For digital media engagement strategies to be successful, they must reflect the wants and needs of the target audience and invite that audience to be part of an ongoing dialogue. NZAFs success has resulted in more resources being allocated to this important channel and away from more traditional channels including print media.
The significance of healthy workplaces on health and wellbeing

Janice Riegen¹
(janice.riegen@waitematadhb.govt.nz)
¹ Clinical Nurse Specialist, Occupational Health & Safety Service and ‘Healthy Workplaces’ Lead at Waitemata District Health Board

Issue
Health, work and wellbeing are inextricably linked (Black, 2012). To increase people’s wellbeing, it is imperative to understand the critical role of the workplace. ‘Good work’ is one of the influences of the societal determinants of health and wellbeing and health inequalities affecting individuals, families/whānau, communities, society, business and the economy. An increase in chronic conditions, often lifestyle induced, and an ageing workforce will present enormous challenges and burdens at numerous levels. The workplace is a microcosm of society, an ideal place to promote healthy lifestyle choices, but there has been little recognition in New Zealand (NZ) of this. Links to organisational and societal outcomes are often not made or understood.

Aims
• To increase the awareness of the critical interface of ‘good work’ and healthy workplaces for improving health and wellbeing at multiple levels to inform policy and practice
• Recognition that there needs to be collaboration, partnerships, holistic and cultural alignments for the best outcomes
• To understand the key measures and outcomes, that will be able to demonstrate cost-effective analysis to support population health, organisational performance and sustainable health care

Methods/actions
• Recent master degree study, ‘Examining Healthy Workplaces’ revealed an abundance of supportive evidence
• These were reinforced through a ground level perspective, qualitative audit of a large number of health care staff and the ongoing developing qualitative and quantitative work within our organisation. These were aligned with a cultural perspective of health, Te Whare Tapa Whā (Durie, 1998) and the World Health Organizations (WHO, 2012) definition of health and the Healthy Workplaces definition and Action Model (WHO, 2010).

Results/achievements
• It is time to move the evidence into practice and the practice into the evidence.

Conclusions
Evidence supports that, “A healthy workforce is key to a healthy population” (Lisle, 2009, n.p.). The NZ and Australian Treasuries are now looking holistically at the multiple factors necessary for wellbeing, which include the individual, family, society, economy, government and the natural environment. The World Health Organization (WHO) has recognised the workplace as having a valuable, critical and imperative role to play for moving forward. They have identified that creating ‘Healthy Workplaces’ is the right, legal and smart thing to do (WHO 2010).

Implications
It is imperative to consider the importance of good work and healthy workplaces as part of a population health approach towards improving our increasing poor health and wellbeing statistics. We cannot afford to ignore the critical interfaces, as the cost of inaction is high at many levels.
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An update on housing pressures and community participation and resilience in the Canterbury earthquake recovery

Graciela Rivera-Muñoz¹
(graciela.riveramunoz@gmail.com)
¹University of Otago, New Zealand Centre for Sustainable Cities, Wellington, New Zealand

Issue
This project looks at how housing pressures in Canterbury are being addressed in the earthquake recovery and how this process is shaped (or not) by the resilience and democratic participation of communities as key stakeholders. This study concentrates on the formation of partnerships to build affordable and social housing, given its importance for wellbeing and health. It concentrates on the role of communities in housing renewal.

Aims
Describe the policy and the socio-political context of the recovery of the housing sector; Conduct a case study of public/private/community partnerships for housing development.

Methods
This project hopes to make a methodological contribution to the field of qualitative research. It contemplates a case study research design to develop an in-depth look at public/private/community partnerships to build social and affordable housing in Christchurch and nearby districts. This design rests on a series of qualitative data collection and interpretation methods that are being applied to develop an overall picture of the recovery of housing in Canterbury and of how communities become involved and to what end:

- Data collection: semi-structured in-depth interviews with key informants/actors, participant observation, document review (policy and media analysis).
- Data analysis and interpretation: iteration and triangulation, directed content analysis (deductive coding based on a theoretical focus on power relations and democracy), critical discourse analysis (power and social and political domination).

Results/achievements
At this point, the project has completed about half of all the data collection involved and is in the early stages of data analysis.

Conclusions
This research project is ongoing and will be able to present broad thematic trends based on the above but is yet to come to final conclusions or recommendations at this point.

Implications
The Treasury has estimated the cost of recovering housing after the earthquakes as one of the biggest contributors to disaster-related economic losses and housing as the biggest recipient of economic investment. The earthquakes also affected the accessibility of data and hindered the capacity of quantitative research to study the question of housing in traditional ways. Housing is a key social determinant of health and the adverse effects of poor housing are well established. From an emergency response and recovery perspective, ease of access to housing after a natural disaster is essential to safeguard the basic humanitarian need for shelter.

The earthquakes had devastating effects to the lower-end of the housing market and the great loss in housing capacity devolved into significant increases in house prices and rents. As a result, it is estimated that the number of homeless may have doubled since the earthquakes, as has the number of households who are sharing accommodation. This has been described as an example of the inverse care law, whereby those who are most in need have the least resources to help themselves and are most likely to live in crowded or inadequate housing with no security of tenure. This population is also the least likely to be insured and therefore ineligible to benefit from Earthquake Commission (EQC) coverage.
Mindfulness as a core strategy for promoting mental health and increasing positive (flourishing) states of well-being

Grant Rix¹, Dr Ross Bernay², Dr Daniel A Devcich³

¹Mental Health Foundation of New Zealand
²Auckland University of Technology, Auckland, New Zealand
³The University of Auckland, Auckland, New Zealand

Introduction
The growing evidence for mindfulness practice shows significant benefits for health across multiple settings (Mental Health Foundation, 2011). The Mental Health Foundation of New Zealand (MHF) is interested in promoting mindfulness in education, workplaces, and healthcare settings in Aotearoa/New Zealand. This interest has grown out of the development, delivery, and research of a New Zealand specific mindfulness in schools programme, the compiling of international and local research looking at the benefits of mindfulness in a range of settings, and the development of an online directory of New Zealand mindfulness trainers. Due to the potential for significant mental health benefits, the MHF views mindfulness as a core strategy for helping to reduce psychological distress and increase positive (flourishing) states of wellbeing.

What is mindfulness?
Mindfulness is the practice of giving our full open-hearted attention to what is immediately occurring, physically and mentally, both within and around us. This quality of attention - mindfulness - depends upon the balance of body and mind in accord with sensory experience. It is a quality that has been empirically validated in a range of settings and can be trained through intentional practice, independent of affiliation with any philosophical system (Black, 2011).

A brief summary of the evidence base
Evidence shows reductions in multiple negative dimensions of psychological stress and beneficial structural changes to the brain following eight weeks of mindfulness training (Goyal et al., 2014; Hoffman Sawyer, Witt, & Oh, 2010; Holzel et al., 2011). Brain activity associated with increased feelings of spaciousness and a sense of coherence has been observed in long-term practitioners, even when they are not formally meditating (Lutz, Greischar, Rawlings, Ricard, & Davidson, 2004). Further evidence from large-scale studies indirectly supports the value of mindfulness practice.

One study looked at the effects of mind-wandering on wellbeing and concluded that people are happier when they are present, even for the most mundane of tasks (Killingsworth & Gilbert, 2010). Another study concluded that the strongest psychosocial determinant for depression was ruminating about negative events (Kinderman et al., 2013). These studies underline the importance of helping people to develop strategies to interrupt unhelpful mind-wandering and recollect the attention in the present moment when required.

Benefits for children
International research shows promising results, particularly in relation to cognitive performance and resilience, in children and young people (Zener, Herrmleben-Kurz & Walach, 2014). Based on the evidence, the MHF developed a mindfulness in schools programme in 2012 that considered the NZ Education Curriculum. Eight lesson plans were developed, and a model of hauora (holistic wellbeing), Te Whare Tapa Whā, was incorporated as a core element of the programme.
Abstracts

Pilot research 2013
One hundred and twenty-six students ranging in age from six to eleven years and six classroom teachers participated. The classroom teachers were asked to complete fortnightly journal entries as part of a qualitative analysis of the effectiveness of the programme. A three-month follow-up survey was completed to assess any potential long-term effects. Preliminary findings suggest that the programme may be efficacious for increasing calm, improving focus and attention, enhancing self-awareness, helping with conflict resolution and the development of positive relationships, and reducing stress. A number of these outcomes were observed in both students and teachers (Rix & Bernay, under review).

Further research 2014
Two studies were conducted in 2014 (results were preliminary at the time of writing).

A mixed-methods approach
This study aimed to verify the positive results of the pilot study by again asking teachers to respond to a series of journal prompts to analyse the effect of the mindfulness sessions on children's social interactions and classroom behaviour. In addition, children were asked to complete self-reports of their own wellbeing and mindfulness using the Stirling Children's Wellbeing Scale (SCWBS) and the Mindfulness Attention Awareness Scale for Children (MAAS-C) to determine if students also reported the benefits noted by teachers. Preliminary results from the teacher's journals indicate that the teachers observed a general positive response to the mindfulness practices, improvements in social interactions, and a genuine sense of calm. Initial review of the students’ self-reports indicates a positive effect on wellbeing and mindfulness in some of the classrooms. Although further analysis of follow-up data is needed, the findings so far appear to indicate that the level of the teacher's involvement and commitment to the programme has a direct effect on the students’ improved social interactions and classroom behaviour.

A randomised-controlled study
This study was an active-controlled, group-randomised study to test the effect of a mindfulness programme on children's self-reported wellbeing. The wellbeing effects of the mindfulness programme were compared with the effects of a control condition that incorporated standard skills-based lessons used to enhance emotional literacy and wellbeing. One hundred and six children from a primary school in Auckland, New Zealand were allocated randomly by classroom to either the eight-week mindfulness programme or the eight-week active control programme. Self-reported wellbeing and mindfulness were measured at baseline and upon completion of the programmes using the Stirling Children's Wellbeing Scale (SCWBS) and the Mindfulness Attention Awareness Scale for Children (MAAS-C). Mindfulness significantly increased for the mindfulness group but not for the control group. Self-reported general wellbeing significantly increased for both groups, but change scores were significantly greater for the mindfulness group, even when controlling for differences in baseline scores. Analysis of the subscales of the SCWBS showed a similar pattern for emotional wellbeing. Although the results are encouraging, more work needs to be done on assessing the mindfulness programme's impact on other important outcomes associated with children's wellbeing, mental health, and academic functioning.

Next steps
Based on these encouraging results, the MHF will continue to promote the mindfulness in schools programme. Work is also progressing in the workplace setting, and opportunities for workforce development, particularly within healthcare and youth work settings, are being explored. In partnership with researchers from New Zealand universities, the MHF is interested in continued research of mindfulness initiatives. In addition, exploratory work is underway to consider a population health approach to mindfulness promotion. The Ottawa Charter for Health Promotion will provide a useful framework. There are others in New Zealand involved in researching and delivering mindfulness initiatives in multiple settings using well-researched, traditional, and innovative methods. Developing key relationships and ensuring a degree of co-ordination among these researchers and practitioners would be a useful next step in assisting with the vision the MHF has for this work.
References


Tapuaki: Pacific pregnancy and parenting programme

Mary Roberts¹, Jacinta Fa'alili-Fidow¹, Amio Ikihele¹
(j.faalili-fidow@auckland.ac.nz)
¹TAHA Well Pacific Mother and Infant Service, University of Auckland, Auckland, New Zealand

Background information
A recent report from the Perinatal and Maternal Mortality Review Committee (PMMRC) found that Pacific women (including those who smoke during pregnancy, women living in poorer areas and women having their first babies) are at increased risk of neonatal death (a baby born alive between 20-27 weeks gestation who dies prior to 28 days of life) for babies born between 20-27 weeks; Pacific women are three times more likely to die while pregnant or up to six weeks after birth than non-Māori, non-Pacific mothers; and have a higher incidence of neonatal encephalopathy; a condition usually resulting from lack of oxygen to the brain around the time of birth (PMMRC, 2014). Furthermore, Pacific women have the highest fertility and birth rates in New Zealand (Ministry of Health, 2013) but represent a low uptake of antenatal education (Dwyer, 2009) despite it being integral to successful pregnancy and birthing experiences (Ferguson, Davis & Browne, 2013). The limited research indicates that less than 1% of participants attending childbirth education in 2009 were of Pacific ethnicity (Dwyer, 2009). The reasons for Pacific people's low engagement in antenatal education are not known as little research has been conducted in this area. What's known is most antenatal education courses in New Zealand are delivered by non-Pacific peoples, with variable knowledge and understanding of Pacific cultural beliefs, which may help to explain this.

A study which looked at infant care practices among different ethnic groups in New Zealand (Abel, Park, Tipene-Leach, Finau, & Lennan, 2001) found that support and advice during pregnancy and after baby was born were very important among the women interviewed. Mothers, mothers-in-law, sisters, aunts and female family members, provided significant practical, financial, and emotional support and advice, and had an important influence on infant care practices. This strong female involvement is a theme common for many Pacific women.

What's more, cultural differences towards beliefs and practices surrounding pregnancy care and parenting may exist for some Pacific women, which can have implications on key maternal and infant health messages. The Tapuaki pregnancy and parenting education programme acknowledges this and recognises the need for antenatal education to be culturally engaging, supportive and inclusive of fathers and extended family in maternity care and infant care.

The programme
Improving health outcomes for Pacific mothers and babies is the motivation behind the Tapuaki Pacific pregnancy and parenting programme. The purpose is also to assist with better engagement of Pacific pregnant women, fathers, their families and care providers and to improve access to and delivery of pregnancy and parenting education. By participating in this programme, it is hoped that Pacific pregnant women of all ages, and their families are empowered to talk about pregnancy and parenting, ask questions, seek advice, and make more informed choices about pregnancy and infant care.

The programme comprises a number of key features which sets it apart from prevailing antenatal education programmes. It is primarily designed for Pacific women, their partners and families. Strategies include:

- Community-based pregnancy education and support services (which includes evidence-based and culturally relevant content and materials)
- Partnerships with existing primary health care providers and other pregnancy support services
- Web-based education and support e.g. website, social media sites
- Phone-based education and support e.g. smart-phone application
During this presentation, findings will be discussed in relation to three pilots of the Tapuaki Pacific pregnancy and parenting education classes that were delivered in Auckland in partnership with Pacific providers during November and December 2013. Both success factors and challenges during both the development process and piloting of this programme will be shared.

**Key findings**
There is little doubt that the piloted Tapuaki pregnancy and parenting programme has been successful in increasing pregnant Pacific women's knowledge and confidence about pregnancy and parenting. The Tapuaki pregnancy and parenting programme is not a stand-alone tool, but one intervention which can assist with better engagement of Pacific pregnant women, fathers, their families and care providers.

The Tapuaki Pacific pregnancy and parenting education programme is the only known programme of its kind for Pacific peoples in New Zealand. It has the potential to improve Pacific women's access to, and use of, maternity services and antenatal education. Through the use of evidence-based and culturally relevant content and materials, Pacific engagement, health literacy, empowerment and participation in antenatal and maternity care can be achieved.

**References**


Let's get employers working for us. The impact of diabetes on longevity in the workforce.

**Juliet Rumball-Smith**, Douglas Barthold, Arijit Nandi, Jody Heyman

(jrs@otagoalumni.ac.nz)

1 Northland District Health Board, Whangarei, New Zealand
2 Institute For Health & Social Policy, McGill University, Montreal, Canada
3 Fielding School of Public Health, University Of California, Los Angeles.

**Issue**

Ageing populations have created substantial financial challenges in many high-income countries. Some countries have responded with policies that incentivise the labour force participation of older workers, such as raising the age of pension eligibility. An alternative is to target drivers of early exit, including those associated with ill health. There is evidence that illness and disease has implications for workplace productivity, absenteeism and retirement decisions. In this study we explored the association between health and labour force exit, focusing on diabetes.

**Aims**

We aimed to explore the impact of diabetes - a chronic, costly and internationally prevalent condition - on labour force exit in older workers, across sixteen high-income countries.

**Methods**

We used data from 66,542 participants enrolled in the Survey of Health, Ageing, and Retirement in Europe, US Health and Retirement Survey, and English Longitudinal Study of Ageing. We matched individuals with and without diabetes on age, sex, and education. To ensure the temporal ordering of the exposure and outcome - that the timing of diabetes diagnosis preceded labour force exit - diabetes was treated as a time-dependent exposure in Cox proportional hazards models.

**Results**

Diabetes was consistently associated with an increased hazard of labour force exit across countries; this association was statistically significant for nine of sixteen countries. In a pooled model (with country included as a stratified variable) diabetes was associated with a 30% increased hazard of labour force exit (hazard ratio=1.30, 95% CI=1.24, 1.35). The greatest hazards of labour force exit were observed in Spain and Ireland; in these countries diabetes was associated with approximately 50% increased risk of labour force exit.

**Conclusions**

This study used data of 66,542 individuals from sixteen countries, finding that those workers with diabetes had a 30% increase in the rate of labour force exit compared to those without. Our findings reinforce the inter-dependence between an individual's health and working life, and the capacity for prevalent chronic diseases to affect labour force dynamics. We also show that the association is cross-national in nature, with elevated estimates found for all sixteen countries.

**Implications**

The economic impact of diabetes due to medical care costs is well documented, however, the costs to employers and society due to lost labour has been under appreciated. Our findings show that workers with diabetes exit the labour force prematurely, which has the potential to impose additional costs on employers, including those associated with the recruitment and training of new workers.
This study provides an additional argument for policy-makers and employers to invest in strategies and programmes targeting the risk of developing diabetes, management of the condition and its complications, and supporting those with diabetes to have productive working lives. There is the opportunity for contributions from both the public and private sectors (and potentially partnerships between these parties), as the benefits are likely to be shared by both.

For more information
Shade in schools – permanent not temporary?

**Louise Sandford ², Christina Mackay¹**

(louise.sandford@cancer.org.nz)

¹School of Architecture, Victoria University of Wellington, Wellington, New Zealand
²Cancer Society of New Zealand, National Office, Wellington, New Zealand

While purpose-built shade sails in New Zealand schools have appealed to and been used by students, in 2014 the Ministry of Education has elected not to support this type of shade canopy because of its limited life span and costly installation. The need for UV protection for fair-skinned children is long term, so more permanent shade structures are required. In New Zealand, covered outdoor learning areas (COLA) must respond to different climatic zones to create UV protective and thermally comfortable spaces. This paper reviews designs of existing COLA in Australasia, and proposes shading materials to suit various sites in New Zealand.

In 2014, New Zealand schools lack effective shade. This is shade that provides effective protection from ultraviolet radiation (UVR) and is comfortable and desirable to use in New Zealand’s temperate climate. As part of the SunSmart Schools Accreditation Programme, the Cancer Society of New Zealand (CSNZ) is advocating to the Ministry of Education (MoE) for improved sun safety policy that can support practice in school settings. At a Ministry level CSNZ has been working with the Property and Infrastructure team to update the Property Toolbox on shade for schools. As this work progressed, questions arose about shade that can enhance Modern Learning Environments in outdoor school settings.

**Questions included:**
1. What is the best shade design for covered outdoor learning spaces in the New Zealand climate?
2. When and where do we need warm shade?
3. What materials should be used to build effective shade with adequate UVR protection?

To investigate these questions, CSNZ worked with Christina Mackay and Catherine Hall in a jointly funded Victoria University of Wellington (VUW) Summer Research Scholarship project. This research analysed climate data to determine when ‘warm shade’ would be useful in schools in different locations around New Zealand.

Analysis has confirmed the benefit of designing warm shade for COLA in New Zealand schools, but more research and development of COLA designs, including alternative cladding materials and systems, is required.
Older people in ‘unsuitable’ housing: Place attachment, suitability and ageing in place

Christina Severinsen¹, Mary Breheny¹, Christine Stephens²
(c.a.severinsen@massey.ac.nz)
¹School of Health and Social Services, Massey University, New Zealand
²School of Psychology, Massey University, New Zealand

Issue
The social policy response to an ageing population reflects preferences for independence and continued community involvement among older people. Discussion of ‘ageing in place’ tends to focus on moving to suitable housing in later life or modifications required to make the homes of older people more suitable. Although ageing in place does explicitly acknowledge older people’s preferences, very little analysis has examined why older people make choices to remain in ‘unsuitable’ places in later life.

Aims
Older people’s housing stories are used to consider the factors which shape older people’s housing decisions and the importance of identity to understanding the places that older people age.

Methods
We examined the ways older people described their homes and their expectations for the suitability of their homes as they aged in one hundred and forty-three interviews with people aged sixty-three to ninety-three years across New Zealand. This paper presents narratives of those who remain in their housing in order to unpack the suitability of housing in later life.

Results
Although some older people described strategic decision-making in terms of housing choice in later life, moving to areas with public transport or to single-level dwellings with future needs in mind, many older people proudly described their homes as unsuitable to accommodate their ageing bodies. Rather than describing accessibility, they described features such as views that they were unwilling to sacrifice to improve accessibility. In particular, older people told stories of the pathways which brought them to live in such places, and the importance of homes in showing their identity, which made them unwilling to relocate in later life.

Conclusions
Although policy recommendations focus on the unsuitability of ageing in such places, a desire to reflect and reminisce in later life can make such aspects of homes particularly suitable places to age. This paper demonstrates the separation between personal and social policy versions of what it means to age successfully in place, and the many meanings of housing in later life.

Implications
To understand the limitations and the possibilities of ageing in place we need to see the multiple narratives that structure the lives of older people and consider nuances in the suitability of housing, ones that do not disrupt the strong identities older people have developed in and through their housing.
A Framework for prioritising Māori health workforce needs

Shirley Simmonds¹
(shirleysimmonds@gmail.com)
¹Affiliation?

Issue
Kia Ora Hauora is a Māori health workforce development initiative aimed at increasing the overall number of Māori in health and disability services. The recently updated aims of Kia Ora Hauora include the identification of regional priority occupations, and their promotion to potential students. This research project sought to develop a framework for prioritising health professions for Māori in the Midland region of New Zealand.

Methods
Key stakeholders for each of the five district health boards in the Midland region were consulted. A literature review on health workforce needs assessment, and indigenous health workforce development was undertaken. Statistical data were obtained on the district health board (DHB) health workforce, and on secondary and tertiary student numbers for the region.

Results
A rights-based approach was taken in the development of the framework, recognising the right of all to the highest attainable standard of health, and the right of tangata whenua (the indigenous population of New Zealand) to self-determination. The framework therefore applies the following four key principles; equity, tino rangatiratanga (self-determination), demography, and Māori health need. The principle of equity was applied to generate numbers of Māori required in each profession in the next five years. The relative level of need for each profession was estimated by applying the principle of tino rangatiratanga, by examining the local demography, and by assessing areas of Māori health need for each DHB region. In addition, the relative level of need for each professional group was estimated following consideration of the potential Māori student supply, and the prioritised professions were finalised following an assessment of job opportunities for the highlighted occupations. Study pathways were developed for each of the final twelve prioritised professions.

Implications
This framework is distinguished from other health workforce needs analyses in that it applies key principles in an effort to prioritise professions for Māori health. User-friendly one-page study pathway fliers were developed which will be utilised by Kia Ora Hauora to promote the prioritised careers to potential students. While it has been used on data for DHB employees in a particular region, the framework and its implementation may be of interest to other regions, for application to non-DHB data, and to those in the area of Māori health workforce development in general.
Move Aotearoa – The interactive workplace challenge to achieve 10,000 steps

Ruth Sliedrecht¹, Louise Cochrane¹
(RSliedrecht@adhb.govt.nz)
¹Auckland Regional Public Health Service, Auckland, New Zealand

Issue
Only 51.7% of adults are currently meeting the New Zealand (NZ) physical activity guidelines (Ministry of Health, 2013). This means that just under half of the adult population is considered physically inactive, which includes sedentary behaviour, both of which can contribute to poor health. One of the key barriers to being more physically active is lack of encouragement or support from others (Ministry of Health, 2003).

Background
Auckland Regional Public Health Service delivers a Workplace Health (WPH) Programme called Heartbeat Challenge (HBC) within which physical activity is one of the priority areas. A key objective of HBC is to reduce the potential risks associated with chronic diseases through the promotion of physical activity and its benefits in the workplace. An annual walking programme called Feetbeat is offered within HBC; however, this is only offered from September to November. Feedback from HBC workplaces, the WPH team and Feetbeat participants indicated support for an additional physical activity challenge that was available for workplaces throughout the year, and which included pedometers and activities other than walking. Based on this, a board game called ‘Move Aotearoa’ was developed as a pilot programme. Move Aotearoa encourages HBC workplaces, family and whānau to get more active by challenging participants to achieve 10,000 steps a day over eight weeks, working their way around a board to forty-four destinations in NZ. All types of physical activity are included and for every 10,000 steps achieved, participants move forward one square on the board. There are also bonus squares and challenges along the way. A leader board and additional family boards are provided to create a supportive environment that fosters motivation, competitiveness and camaraderie.

Aims
The primary aims of this pilot were to assess whether implementing an interactive board game in the workplace resulted in participants:

• being physically active
• achieving the NZ physical activity guidelines

The secondary aims of this pilot were for participants to:

• become aware of their current physical activity levels
• experience motivation to be active
• engage their families in physical activity.

Methods
In April 2014, seventy-six HBC workplaces were invited to participate in the pilot and if interested were asked to complete a selection criteria form. Selection criteria included the provision of a challenge coordinator, at least twenty participants and management support. Sixteen workplaces indicated interest of which four formally registered and were selected. Two of the workplaces were selected to pilot with pedometers and the other two selected to pilot without pedometers. Two hundred and twenty-two participants were involved in the pilot and seventeen family boards were used. Programme coordinators provided overall feedback, participants completed a feedback form and four participant focus groups were held across the workplaces.
Abstracts

Results
The response rate for the feedback form was 23% (51). 48% (24) of survey respondents identified as European or Pakeha and 26% (13) identified as Māori, Pacific or South Asian. 52% (115) of participants completed the pilot. There were a number of factors identified that may have contributed to attrition. A key finding was that the programme should be team based. Participants discussed how they did not want to be singled out for over or under-achieving their steps and that teams would be more competitive, could be used as motivation and enable them to do it with others. Other reasons for the attrition included the logistics of wearing a pedometer in different occupations and holding the pilot in winter.

51% (25) of respondents indicated that their physical activity levels increased, 68% (35) felt motivated to be active and 61% (30) met the physical activity guidelines after the pilot which exceeds the national average (51.7%). The pedometers encouraged participants to increase their physical activity levels as they increased awareness and provided an understanding of how much activity they were doing. Comments from those who participated without a pedometer advised it would have been easier if they’d had one. Other findings were that participants found new ways to become more active, those who were not active daily thought about it more and the 10,000 steps required extra effort and gave participants something to aim for.

78% (39) of survey respondents liked the playing board, specifically the colours on the board and the concept of using the New Zealand destinations to learn about new landmarks. Participants discussed the New Zealand theme being motivating, visual and fun. 94% (47) of survey respondents found the instructions easy to follow and 74% (47) found it easy to calculate their steps. 79% (40) said that they would participate in Move Aotearoa again.

Key recommendations to strengthen the programme include making the challenge team based, providing pedometers to all participants, change the playing board to a group board using the New Zealand map, provide information about the destinations and have the programme professionally designed. It is recommended that HBC workplace health promoters individually work with each of the programme coordinators as to how they could improve engagement of Māori, Pacific and South Asian employees. It is also recommended to review how to engage families more effectively as only 8% (4) had family members participate with them. In doing so there needs to be consideration as to how family members can connect with the programme when it is based within the workplace setting. Final recommendations are for programme coordinators to scope opportunities to incentivise the programme and promote local physical activity opportunities.

Conclusions
This pilot demonstrated the potential for physical activity initiatives in the workplace that are available any time of the year, require minimal external support, include all types of activities and reduce sedentary behaviour. The introduction of Move Aotearoa as part of HBC or for use by other communities is currently being investigated.

References

Adverse Health Effects Associated with “Smart Meters”: The New Zealand Experience

Katherine Smith
www.stopsmartmeters.org.nz

I Issue
The new “smart” electricity meters which have been introduced into New Zealand (NZ) over the last few years use radiofrequency radiation (RFR) in the microwave range to transmit information about electricity consumption. The standard that covers RFR (NS2772.2:1999) is designed to protect only against thermal injury, not other potential adverse effects. The World Health Organization's International Agency for Research on Cancer (IARC) has determined that radiofrequency radiation in the microwave range is a “possible carcinogen” class 2B (the same as lead and DDT) (IARC, 2012). The American Academy of Environmental Medicine has called for a moratorium on “smart meters”. A variety of unpleasant symptoms have been reported following exposure to the RFR produced by “smart meters”. Grassroots organisations opposing “smart meters” have developed in many countries as a result of health and privacy concerns and higher electricity bills.

Aims
The aim of www.stopsmartmeters.org.nz is to inform New Zealanders about the potential health risks associated with “smart meters”, and to assist people retain their existing analogue meter if they do not want a “smart meter” or to get an existing “smart meter” removed, because, for example, it is making them ill. (This is not usually easy, as once “smart meters” have been installed companies are reluctant to remove them.) Exposure to the RFR from “smart meters” has been reported to trigger electrohypersensitivity (EHS) in some people, and one of the goals of the website is to increase public and professional knowledge and understanding of this condition, which can cause a diverse, and potentially disabling, range of symptoms.

Methods/actions
In order to facilitate these goals, www.stopsmartmeters.org.nz provides basic facts about “smart meters” in English and other languages. The website corrects misinformation commonly promulgated by the electricity industry such as that it is compulsory to have a “smart meter” in NZ. It also publicises initiatives taken by local groups, such as public screenings documentary Take Back Your Power, and provides a resources page to encourage people to take an active role in educating others about the “smart meter” issue.

Results/achievements
Website traffic to www.stopsmartmeters.org.nz is increasing and public awareness about the “smart meter” issue also appears to be growing.

Conclusions
By providing a NZ-based resource for information about “smart meters”, www.stopsmartmeters.org.nz is assisting New Zealanders to make an informed choice about whether or not they want this technology in their home. The contact form on the website allows people to report symptoms that they believe are associated with their “smart meter”.

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**Implications**

Information volunteered by members of the public to www.stopsmartmeters.org.nz indicates that “smart meters” are causing substantial suffering for some people in NZ. In some cases people have developed symptoms prior to realising that their analogue meter had been replaced with a “smart meter”, thereby ruling out a nocebo effect as an explanation. Symptoms that have been reported to www.stopsmartmeters.org.nz include headaches, sleep disturbances, palpitations, tinnitus and burning sensations in the skin and eyes. The cause of the symptoms may not initially be suspected by the person or their physician. This has the potential to lead to prolonged illness. Given that “smart meters” are suspected to trigger EHS in some people, a prolonged interval between the development of symptoms, recognition of the possible role of the “smart meter” and removal (or adequate shielding) of the “smart meter” may potentially increase the risk of EHS.

**Reference**

“Kotahitanga - we’re in this together”: A community participation approach to inform primary care service development in Kere Kere, Horowhenua

Janine Stevens1
(janine.stevens@midcentraldhb.govt.nz)
1Central Primary Health Organisation/MidCentral DHB, Palmerston North, New Zealand

Issue

Provision of primary health care services in small towns and communities in New Zealand is often fraught with tensions. The people of Kere Kere, who live in the small urban centres of Shannon, Foxton, Foxton Beach, Himatangi Beach and the wider rural area of Moutoa in the Horowhenua district, have experienced significant uncertainty about the delivery of primary health care in their communities over many years. The development of Te Waiora, an integrated community health service in Kere Kere, offered some assurance to the community of ongoing provision of general practice services locally and it also provided an important opportunity to reconsider the delivery of primary care services to achieve health gains for the local population. There was a strong desire within the Te Waiora project team to ensure the availability of sustainable services that were responsive to community priorities and needs and that would inspire confidence in the quality and longevity of primary health care in the area. A comprehensive model of care that reflected the kaupapa tuku iho (the underlying values) of Te Waiora was fundamental to achieving this vision and a strong reflection of the “community voice” in the developing work plan was sought.

Aims

The purpose of this project was to identify opportunities for change in the way primary health care services were delivered in Kere Kere from a community perspective in order to improve patient experiences and health outcomes for the population.

The main aims were to:

1. Identify the key community priorities for primary health care services in Kere Kere
2. Provide the Te Waiora project team with an analysis of the identified priorities that could be used to inform the model of care
3. Establish meaningful alignment between the priorities of the community and the kaupapa tuku iho of Te Waiora

Methods/actions

Face to face interviews were conducted with twelve people living and working in Kere Kere to collect a range of opinions about the provision of primary health care services in the local area. The interview participants had a variety of roles within the community and included health and other service providers as well as local community residents and hapū members. They expressed a broad range of views about health, wellbeing, and health service delivery that were relevant across the different geographical communities of Kere Kere, across the life span, and from both Māori and European perspectives. Qualitative thematic analysis was used to examine the transcripts for themes emerging from the community interviews.

Results/achievements

The foremost health needs and priorities identified in the community voice interviews were summarised under two main themes: access to health care; and service integration and co-ordination. There were a number of negative influences on access identified including a lack of easily understandable information about what services were available and how people could access them, poor acceptability of general practice services for some people in the community, difficulty getting timely general practice
appointments, and significant financial barriers for many people. The interview participants also highlighted the impact on the community of a lack of co-ordination between primary and secondary health services, and limited integration with a large number of social services. They believed that a lack of collaboration between services was causing additional stress for individuals and whānau, particularly for people with very complex health and social needs.

The main community priorities identified in the interviews for improving access were based on strengthening relationships and enhancing communication between health providers and individuals and whānau. The development of specific strategies to increase the affordability of general practice services as a means to addressing some of the financial barriers to seeking health care earlier in the course of illness and to encourage access to preventive health services was also emphasised.

Strong relationships and collaboration were also identified as essential factors to improve integration and co-ordination of care between health providers and between health and social agencies, and the use of suitable technology to share essential information was identified as an opportunity for Te Waiora to improve health experiences for the people of Kere Kere. The interview participants strongly advocated for the establishment of a specific health navigator type role to provide extra assistance for people with complex needs.

The analysis of community perceptions and priorities derived from the interview findings and a number of recommendations for enhanced delivery of primary care services from the community perspective were included in a report to the Te Waiora project team. The recommendations were used to inform the model of care for the Te Waiora community health care service and key concepts from the analysis were evident throughout the work plan that was subsequently developed. Many of the included concepts were supported by the kaupapa tuku iho of Te Waiora and examples of the expression of the kaupapa were made explicit throughout the model of care.

**Conclusions**

This project successfully brought the ‘community voice’ into the primary care domain in Kere Kere through meaningful engagement between the community and the providers of the community health service. The reflection of community priorities in the model of care work plan demonstrated a commitment by Te Waiora to adopt methods of working to address the needs of their patient population and the wider community that were clearly aligned with the underlying values of the health service.

**Implications**

The successful inclusion of community priorities into a working model for delivery of primary care services in Kere Kere provides support for the role of community participation in primary health care service development and improvement.
2013 Census: Sixty percent of New Zealand children exposed to tobacco in the home

Prudence Stone¹
(director@sfc.org.nz)
¹Smokefree Coalition, Wellington, New Zealand

Issue
New Zealand government made a commitment in 2011, to making Aotearoa New Zealand Smokefree (prevalence <5%) by 2025. Census 2013 indicated prevalence was already falling rapidly, from 23% (598,000 adult smokers) in 2006, to 15% (463,000) in 2013. Since 2006 much has changed to bring about this decline in prevalence: a series of annual 10% tax increases, a retail display ban, innovations in cessation methods as well as a population-based approach to brief advice and referral to quit through primary and secondary healthcare services. Based on the census data the assumption might be made that the fall in prevalence among adults determines a declining rate of children exposed to tobacco inside their homes, a factor that will contribute to our likelihood of achieving the 2025 Goal.

Aim
To review the number of children in New Zealand living in households where at least one adult smokes. To determine from these statistics whether preventive tobacco control measures are necessary. To determine whether children’s exposure to tobacco in the home is related to household income. To assist regional Smokefree networks in understanding the risk of uptake inside their regions.

Method
The Smokefree Coalition requested data from Statistics NZ on the number of children living in households where at least one adult smokes, with cross-variables of household income and district health board (DHB) region. We broke household income into three categories: < $50K, $50-100K, >$100K to test for association, both nationally and by DHB region. We allowed a threshold <$25K to define a household in poverty. We created an infographic that documented this information, to accompany national and regional press statements on the data, and distributed it to the Smokefree networks.

Results
We found 603,807 children were living in households where tobacco is smoked by a resident adult. 12% (71,875) of these children also lived in households under the poverty threshold. There was no association nationally between child exposure and low income: 33% lived in homes where total income is below $50K; 39% where total income is $50-100K; and 28% where total income is >$100K. When the population was split regionally, however, association between child exposure and low income was found in Northland, Tairawhiti and Whanganui. Incidentally, association between child exposure and high income was found in Waitemata, Auckland, Counties/Manukau and Wellington.

Conclusion
Around six out of every ten New Zealand children are exposed to tobacco use inside their homes. Children living in households where tobacco is smoked outnumber adult smokers in New Zealand three to two. Children are just as likely to be exposed to tobacco use in the home whether their household is wealthy or live below the poverty line, however there is a strong indication that association of income is determined by urban/ rural conditions.

Implications
The Census 2013 prevalence data gives us a false sense of security that we can achieve the 2025 Goal. Previous studies have demonstrated that the greater exposure to tobacco use, the more likely it is a child will take up smoking. Preventive measures are necessary to mitigate the higher risk of uptake among this majority of children.
Ecosystem threats and fossil fuels: Public health implications

Peter Tait¹
(aspetert@bigpond.com)
¹Ecology and Environment Special Interest Group, Public Health Association of Australia

Dedicated to Tony McMichael, mentor and encourager.

In this presentation I want to cover three things:
1 first some of the history of public health, to put the current situation regarding the relationship between public health and the environment in a longer term context;
2 very briefly I re-iterate the links between the natural environment and health; and
3 finally I discuss the role of public health practitioners in addressing environmental factors that influence health in the Anthropocene.

The background to this presentation is a pair of articles published this year in the Australian and New Zealand Journal of Public Health (Tait McMichael, & Hanna, 2014; Tait, 2014a).

John Snow's story of detective work and political manoeuvring to identify and stop the 1854 London cholera epidemic is rightly identified as a defining moment in public health science. But Snow's work had been preceded by decades of campaigning to improve the sanitary conditions of towns in order to create a healthy workforce for industry. People in the 19th century understood that control of infectious disease was determined by the adequacy of the physical and built environment.

From these roots, modern public health has developed a set of 'functions' or 'services' which we provide to help maintain a healthy society (Frumkin, et al 2008):

• noting and monitoring problems;
• educating the public, the health professions and decision takers;
• forging alliances with others taking action, and
• advocating for a full range of institutional responses from social marketing through policy development to legislation.

These continue to be the core methods for bringing about change to maintain and improve the public's health. The new public health, emerging from the primary health care movement of the 1970s, articulates strongly that healthy people are grown in a healthy society; one that is fair and just, and in which people have a sense of control of their lives. It recognises that a healthy environment underpins a healthy society (WHO, 2008).

But it has eclipsed the older, environmental health aspects of public health which have become relegated to the environmental health sector, where un-noticed and limited in practice, it supports the institutions and infrastructure that permit fresh air, clean water, safe food and clean streets.

The Millennium Ecosystem Assessment model (Corvalon et al 2005) links the ecosystem and human society, articulates ecological foundations for wellbeing, which it defines as a broader, more encompassing concept, which includes health, autonomy, participation in governance, good social relations, economic prosperity and security. It puts humans into their environment and makes explicit that human personal and social wellbeing depends on a functioning ecosystem.
At the same time but with less fanfare a broader ecological perspective on human health has continued, and there is a thriving body of work (Baer & Singer 2009; Chu & Simpson 1994; McMichael, 1993). But it is not having an impact on public health policy. Additionally there are organisations (for example EcoHealth) who are working within the human political ecology space. But again they are not being noticed by mainstream public health nor general society.

So in the face of global environmental change in the Age of the Anthropocene, what do we as public health professionals and concerned citizens do? Are our traditional tools sufficient? Where should our priorities lie? Of course we need to continue to use the tools that we have: monitor, research, educate, inform, advocate. We need to continue to work to change the social structures and arrangements that determine the illness and distress that are making people sick. But I think we can do this more effectively if we work upstream at the level of root causes; we need to be clear about the systemic nature of these causes, and what parts of the system are driving these deleterious changes to health and environment: our socio-politico-economic systems.

I have argued elsewhere that a major driver of social, health and ecological damage is the operations large, often transnational, corporations. I suggest therefore the focus for system change is corporate behaviour, and we have influence on that via the pathways affecting government regulation (Tait, 2014b).

We do that:

- by making our governance system more democratic, and
- by shareholder action to make corporations themselves more democratic.

As a case in point, these companies (Adani, ExxonMobil, NZ Coal and Carbon, Rio Tinto, Origin Energy, Waratah Coal and Hancock Prospecting among many others) intend to put nearly five times more carbon into the atmosphere than the amount assessed to give us a 50:50 chance of keeping global warming below two degrees. So, is safeguarding the ecosystem of transcendent public health importance? To safeguard the ecosystem, we can act professionally and personally. We can join an organisation or a movement or a campaign - be actively involved. We can protest. One focus for change is to remove legitimacy from fossil fuel companies while they continue to extract coal, gas and oil, produce energy from fossil fuels, and resist the energy transformation to renewables. The divestment movement is one component of a campaign to do this.

The idea is not to bankrupt the corporations; they are much too big for that. The aim is to remove their social licence to operate, and make it socially and politically unacceptable to support taking carbon from the ground to put it into the atmosphere. We want banks, insurance companies and superannuation funds to invest instead in a safe renewable powered future. We want parliamentarians to notice and to stop approving further fossil fuel exploration and extraction.

And, being really clear that civil disobedience is NOT a PHANZ or a PHAA advocated position at all, and recognising that each person’s individual circumstance, their family, their career stage, their employer, all matter in the decision, but to raise as a legitimate question that we all, as individuals faced with a transcendent public health issue, need to consider in the broader ethical and moral domain of public health practice, how far need we go to defend a safe and habitable planet?
To conclude, the take home messages:

1. first, we should be talking about both sets of determinants, ecological as well as social determinants, together, to remind ourselves, our parliamentarians and the public that the environment is a health determinant.

2. Secondly, in the Anthropocene, we need to be working in a context that recognises an essential action is regulating corporate capacity to damage health directly and indirectly through damage to the environment,

3. more urgently to focus on the need to regulate fossil fuel corporations to keep their carbon stocks in the ground, and

4. third, we need to join others in organisations and movements to actively campaign to oppose further environmental and hence social damage; in this context I raise the question about when is the situation dire enough that we need to move outside traditional public health roles and consider more direct action?

Or, how do we make a big enough stink in 2014 and 2015 that will make parliamentarians the world over sit up and take action?

References


What patients really want: Nurses responding to the voices of whānau who smoke

Jeanine Tamati-Paratene1, Shona McLeod, Grace Wong1
(kahukili@xtra.co.nz)
1Smokefree Nurses Aotearoa New Zealand, AUT University, Auckland, New Zealand

Issue
Around 80% of people who smoke want to quit and will try many times to stop before they succeed. As a population however, smokers have not yet had an overt voice in any previously developed smokefree campaigns in the effort to reduce the health burden on smokers and their families or to achieve Smokefree 2025 goal.

Aims
To encourage more responsive brief stop smoking interventions in general practice (GP) settings by providing an opportunity for smokers, ex-smokers and whānau to let health practitioners know what is working, and what they would like from them. To provide stop smoking practice exemplars which address patients' expressed needs.

Methods/actions
We conducted five focus groups with 35 Māori, Pacific, European and other smokers, recently quit smokers, and family members to explore experiences of stop smoking interventions, provided in GP settings and what patients really want.

The data were used to determine key messages for an education/awareness raising campaign. A series of short videos were made featuring patients who smoke, whānau of people who smoke, currently practising nurses, the Chief Nurse, Smokefree Nurses Aotearoa/New Zealand, and the Hon. Tariana Turia. Participants answered questions spontaneously and participated in unscripted, unrehearsed stop smoking interventions.

Resources will be distributed via smokefree networks, the internet, primary health organisations (PHOs), schools of nursing, conference presentations and nursing media.

Results/achievements
Focus group results: Most participants who smoke want to quit although some cannot imagine a life without smoking. All expect their practitioners to ask them about smoking. Participants want:
• Caring, warm, personalised encouragement at every encounter
• Brief phone follow-up from their own GP practice staff
• Choices - cessation support options
• To understand how to use nicotine replacement therapy and other medications
• Information and advice about electronic cigarettes

The practice exemplars show that the points raised by focus group participants can be addressed in the context of brief stop smoking cessation interventions. A wide variety of nurses demonstrate a range of relationship building skills tailored to the different needs of patients who smoke (Māori, Pacific, European, pregnant, male, female). They role-model a repertoire of partnership building and communication skills providing patients with hope, self-belief as well as information and strategies to move forward. Patients expressed they experienced the encounters positively.

Conclusions: Smokers have expressed their needs. Nurses have provided clear, engaging exemplars showing how the profession can deliver responsive interventions by reflecting the evidence-based revised Stop Smoking Guidelines, the Nursing Council of New Zealand’s Code of Conduct for Nurses and Competencies for nurses and the caring component of nursing practice. Exemplars also demonstrate many ways this can be achieved.
Kahuku: Health through Education

Kim Tangaere¹, Kim Kingh¹, Rebecca Tegg¹, Wiki Shepherd-Sinclair¹
(wikis@adhb.govt.nz)
¹Auckland Regional Public Health Service, Auckland, New Zealand

Issue
The early childhood education (ECE) sector is a complex and dynamic environment where the role of health providers remains ambiguous. Inconsistent delivery of key health information, an absence of public health leadership, limited collaboration and a paucity of professional development opportunities for ECE teachers are exacerbating health challenges within the sector.

Aims
To improve the health and wellbeing of children (zero to five years) by strengthening environments and building the capacity of early childhood education staff in the Auckland region. In 2012 Auckland Regional Public Health Service (ARPHS) began development of Pūrerehua, a comprehensive, evidence based health promotion programme targeting prioritised early childhood education services (ECES) in the Auckland region. Based on capacity building (New South Wales Capacity Building Framework (2001) and cultural frameworks, the Pūrerehua programme aims to reduce health inequities through strong leadership and clear coordination, to build the capacity of health providers and strengthen ECE environments. Kahuku is a targeted health promotion professional development training programme modelled on the ‘Keeping Families and Communities Well’ project developed by Waikato District Health Board and is one of six key interventions under the Pūrerehua programme.

Methods/ actions
The Kahuku programme was developed through engagement with manawhenua and key stakeholders from the health and education sectors. Self-identification was used to gauge involvement of stakeholders into overarching steering, working or module development groups. Needs analyses were conducted with thirty-one prioritised ECES by semi structured interview. A literature search and findings informed module design and a prioritisation process was undertaken to identify targeted ECES. Seven “Preventing Communicable Childhood Illnesses” professional development trainings were delivered in community venues with a total attendance of 133 participants from forty prioritised Auckland ECES.

Results/ achievements
Evaluation criteria rubrics were developed and participants’ knowledge measured pre and post training against three objectives. On all three measures the rating of excellent was achieved with more than 85% of participants being able to demonstrate awareness, understanding and knowledge increases of between 45% - 57% post training. Process evaluation findings indicate that the training was well planned, delivered and useful.

Conclusions
Kahuku has contributed significantly to emerging partnerships between health providers and provided a platform for capacity building to ECE staff and environments across the Auckland region. Kahuku provides further evidence of essential contributors to successful professional development particularly the use of a well-defined programme structure, innovative collaboration tools, external evaluation support, and expert knowledge solicited through joint planning and delivery.

Implications
Based on the evaluation findings further scope for professional development exists. Learnings will be utilised to inform future programme direction, planning, implementation and evaluation.

Reference
Social and economic benefits of investing in sexual and reproductive health

Louise Thornley¹ (louise.thornley@familyplanning.org.nz)
¹Research and Policy Advisor, Family Planning

Abstract
Sexual and reproductive health has traditionally been a Cinderella of the health sector; overlooked and neglected. Aotearoa New Zealand lags behind other countries in this area, lacking national strategy and leadership.

Sexual and reproductive health outcomes show stark inequities, with Māori, Pasifika and lesbian, gay, bisexual, trans and intersex (LGBTI) young people among the worst affected. Yet research evidence increasingly supports the potential of sexual and reproductive health action to influence the major social and economic determinants of health.

This paper argues that sexual and reproductive health strategies can improve social and economic outcomes, reduce inequity, and save public money. It synthesises examples of recent research findings on the social and economic impact of investing in sexual and reproductive health.

The evidence suggests a need for greater policy priority - and a national, multi-agency approach - on sexual and reproductive health in Aotearoa New Zealand. A national approach should use a population-health perspective to promote wellbeing and address the multiple determinants of sexual and reproductive health. Three recommended starting points are: political leadership, a national action plan with a focus on reducing inequities, and nationwide implementation of comprehensive sexuality education.

Introduction
Policymakers and politicians have tended to treat sexual and reproductive health like Cinderella – neglected and forgotten. Research evidence, however, shows a range of benefits of investing in this area (Fullerton & Burtney, 2010; Poobalan et al., 2009; Sonfield, Hasstedt, Kavanaugh, & Anderson, 2013). Greater investment in sexual and reproductive health offers strong potential for improving not only health, but also social and economic outcomes.

Current status of sexual and reproductive health
At the national policy level, New Zealand lacks political leadership and policy capacity on sexual and reproductive health. For example, there is no strategy or action plan for the sector as a whole. The most recent strategy, produced in 2001, was not implemented or supported – with the exception of an agreed action plan for HIV. Until recently the Ministry of Health lacked dedicated policy analysis in sexual and reproductive health.

Qualitative research with sexual health practitioners has identified New Zealand’s sexually-conservative culture as a major structural barrier to best practice (Terry, Braun, & Farvid, 2012). Participants viewed the lack of political commitment or strategic approach as closely related to this conservatism. Practitioners suggested that New Zealanders generally struggle to have discussion or debate about sex and sexual matters.

Despite these structural barriers, at the practice level New Zealand has a highly-skilled and dedicated workforce carrying out much effective action, such as health promotion, the development of youth health and school clinics, and HIV prevention among men who have sex with men.
Benefits of investing in sexual and reproductive health

International evidence links sexual and reproductive health intervention with health, social and economic benefits, and with improvements in equity. Family planning, particularly the education, services and products that enable people to decide whether or when to have children, is a key example. The Institute of Medicine has stated: “The ability of individuals to determine their family size and the timing and spacing of their children has resulted in significant improvements in health and in social and economic wellbeing.” (Hemmige, McFadden, Cook, Tang, & Schneider, 2013)

Increasingly, family planning is being recognised as a critical factor in improving economic and educational outcomes, for example. A review of research over the past three decades concluded that access to contraception is associated with better educational achievement and employment outcomes for women, and reductions in the gender pay gap (Sonfield, Hasstedt, & Benson Gold, 2013). At a country level, access to family planning is linked with higher productivity, savings in health and other services, and gains in gender equity, poverty reduction and economic growth (Smith, Ashford, Gribble, & Clifton, 2009).

Further, investment in sexual and reproductive health can reduce demand on natural resources and the environment. A range of academics, including authors of Intergovernmental Panel on Climate Change (IPCC) publications, indicate that meeting the current levels of unmet need for family planning – in both developed and developing countries – could be an effective tool in tackling climate change (Butler & McMichael, 2010; Lancet, 2009; Potts & Marsh, 2010; Smith & Woodward, 2014). Such a strategy would clearly need to be non-coercive, using rights-based and equity-focused approaches to increase voluntary access to family planning services and contraceptive products (Lancet, 2009).

Cost-benefit evidence indicates that family planning services are financially worthwhile (Daube, 2014; Singh & Darroch, 2012). For example, in 2008 an estimated $US1.9 billion were spent to fund family planning programmes in the United States. This investment resulted in 7 billion dollars of savings for Medicaid for the cost of preventing unplanned pregnancies (Lavin & Cox, 2012).

Intervening to reduce inequities in sexual and reproductive health

Sexual and reproductive health outcomes show some of the most striking inequities, and in some areas the disparities are worsening (Ivankovich, Fenton, & Douglas, 2013). Over the past two decades, for instance, unintended pregnancy has become increasingly concentrated among low-income women (Guttmacher Institute, 2014). In New Zealand, groups with disproportionately poor health outcomes include Māori, Pasifika, low income groups, and LGBTI young people (e.g. Clark, Crengle, Sheridan, Rowe, & Robinson, 2014a; Clark et al., 2014b; Clark et al. 2013; Crengle et al., 2013; Fallon, 2011; Helu, Robinson, Grant, Herd & Denny, 2009).

Growing evidence illustrates the effectiveness of particular interventions to reduce inequities in this area. Recent systematic reviews provide support for HIV prevention interventions targeted to ethnic minority adolescents, and for family communication interventions in increasing condom use among African American and Latino youth, for example (Hemmige, et al., 2012; Sutton, Lasswell, Lanier & Miller, 2014).

These international findings are consistent with New Zealand experience and evidence on the importance of whānau-centred approaches and the role of family connectedness in supporting young people to adopt positive sexual and reproductive health behaviours. Analysis of the national youth health survey of secondary school students, for instance, found that Māori male secondary school students who reported good connectedness with whānau were more likely to use condoms (Clark et al., 2014a).

Expanded access to long-acting reversible contraception (LARC) has led to a greater uptake of LARC by low-income women. A three-year initiative in Colorado, for example, sought to address barriers to contraceptive access by training providers, financing LARC method provision at family planning clinics, and increasing patient caseload. The initiative resulted in a four-fold increase in LARC use among fifteen to twenty-four year old women on low incomes (Ricketts, Klinger & Schwahrlberg, 2014).
Conclusion and recommendations
New Zealand and overseas research highlights that investment in sexual and reproductive health can be effective not only in improving health outcomes, but also in contributing to broader social and economic gains. The Centers for Disease Control and Prevention named family planning as one of ten significant health achievements of the 20th century (Ivankovich, Fenton, & Douglas, 2013).

To build on existing practice-level successes and improve outcomes in Aotearoa New Zealand, there is an urgent need for the following priority actions:

- Stronger political commitment and leadership on sexual and reproductive health and rights
- A national coordinated strategy and action plan with a focus on reducing inequities (implement Recommendation six of the Health Select Committee report on improving child health and preventing child abuse), and
- Nationwide implementation of comprehensive sexuality education in schools and communities which emphasises respectful relationships and skill development.

References


Why is the risk of bicycle crash injury higher in the Auckland region?: Findings from the Taupo Bicycle Study

Sandar Tin Tin¹, Alistair Woodward¹, Shanthi Ameratunga¹
(s.tintin@auckland.ac.nz)
¹University of Auckland, Auckland, New Zealand

Background
Regular cycling plays an important role in increasing physical activity levels but raises safety concerns for many people in New Zealand. Cyclists bear a higher risk of injury than most other types of road users but the risk differs geographically and is highest in Auckland, the country’s largest and fastest growing metropolitan region.

Aims
This study aimed to assess the contribution of individual, neighbourhood and environmental factors to the differential risk of bicycle crash injury in Auckland relative to the rest of New Zealand.

Methods
The Taupo Bicycle Study is a prospective cohort study designed to examine factors associated with regular cycling and injury risk. A total of 2590 adult cyclists were recruited from the Lake Taupo Cycle Challenge in 2006 and followed over a median period of 4.6 years through linkage to insurance claims, hospital discharges, mortality records and police reports. The Auckland participants were compared with the rest of the cohort in terms of baseline characteristics, crash outcomes and perceptions about environmental determinants of cycling. Cox regression modelling for repeated events was performed with multivariate adjustments.

Results
Of the 2554 participants whose addresses could be mapped, 919 (36%) resided in Auckland. The Auckland participants were less likely to be Māori but more likely to be socioeconomically advantaged and reside in an urban area. They were less likely to cycle for commuting and off-road but more likely to cycle in the dark and in a bunch, use a road bike and use lights in the dark. They had a higher risk of on-road crashes (hazard ratio: 1.47; 95% CI: 1.22, 1.76) but had a similar risk of off-road crashes (hazard ratio: 0.96; 95% CI: 0.77, 1.21). About 53% of the differential risk of on-road crashes was explained by differences in participant characteristics, particularly cycling off-road, in the dark and in a bunch and residing in urban areas. The Auckland participants were also more concerned about traffic volume, speed and drivers’ behaviour, suggesting that the remaining risk differential may be contributed by the region’s car-dominated road environment.

Conclusions
The Auckland cyclists had a higher risk of on-road bicycle crashes, which was partly explained by their cycling patterns and urban residence and may also be mediated through the region’s transport environment.

Implications
The findings underscore the need for multidisciplinary systems approaches to prevent bicycle crash injuries and address geographic disparities. Particular attention should be given to developing sustainable transport systems that ensure mobility, accessibility and safety for all road users.

For more information
Household experience of gambling-related harm by socioeconomic deprivation in New Zealand: Increases in inequality between 2008 and 2012

Danny Tu¹, Rebecca J. Gray¹,², Darren K. Walton¹,³  
(d.tu@hpa.org.nz)  
¹Health Promotion Agency, Wellington, New Zealand  
²University of Otago, New Zealand  
³University of Canterbury, New Zealand

Issues
The New Zealand economy entered a recession in early 2008 and was then affected by the global financial crisis (GFC). Recessions have an impact on the overall participation levels in some forms of gambling and other health behaviours, such as problematic drinking. In 2012 nearly 18,000 (0.5%) New Zealanders aged fifteen and over were classified as ‘problem’ gamblers. They make up a small proportion of the New Zealand population but the harm caused by problem gambling behaviours extends to families, friends, businesses and the community. The New Zealand Ministry of Health aims to reduce the disproportionate levels of gambling harm among specific at-risk population groups, which include Māori, Pacific people and people living in the most deprived areas.

Aim
The aims were to assess whether New Zealanders’ gambling participation and experiences of gambling related harms have changed during a period of increased economic stress. Bearing in mind the relationship between deprivation and adverse social and health consequences, and the possible exacerbation of inequalities between areas of differential deprivation, we investigated the changes in reports of individual gambling and household experience of gambling harm, by deprivation, between 2008, 2010 and 2012.

Method/actions
Three nationally-representative survey datasets from in-home face-to-face Health and Lifestyles Surveys in 2008, 2010 and 2012 were analysed to investigate changes in gambling behaviour, experiences of household-level harms related to gambling, and the association with other demographic measures including socioeconomic deprivation in New Zealand.

Results/achievements
Although the proportion of New Zealanders who took part in gambling activities declined from 2008 to 2012, the experience of gambling harm at the household level was significantly higher in 2012 compared with 2008 and 2010. Those in more deprived areas experienced the increase in harm disproportionately. The people living in the most deprived areas were 4.5 times as likely to experience a gambling-related argument or money issue compared with people living in the least deprived areas in 2012.

Conclusion
People in more deprived areas are more likely to have experienced household-level gambling-related harms, so we argue that while inequalities with regard to individual problem gambling might be reducing, inequalities in gambling harm at the household level have actually increased. We consider several possible explanations for the increase and concentration of gambling harm on households in more deprived areas: the idea that people who are living in deprivation may be impelled to gamble more in times of economic stress; the issue of households’ relative resilience to times of economic stress; and the placement of risky forms of gambling in more deprived areas.
Implications
The causes of gambling harm in deprived communities, including placement of electronic gambling machines (EGMs) in poorer areas, need to be addressed if inequalities are to be reduced. In addition, gambling-related harms should be considered as just one experience that households in poorer areas are more at risk of during difficult economic times. Efforts to minimise gambling-related harm may need to include a wider consideration of the need for people in relatively deprived households to have enough emotional and financial resilience to withstand difficult times.

For more information
National Mental Health and Addiction Services Smokefree Guidelines development: Shifting the culture

Kim Williams
(kim.williams@hbdhb.govt.nz)

1Smokefree Team, Hawke's Bay District Health Board, Hawke's Bay, New Zealand

Background
In 2011 the Ministry of Health declared an aspirational goal for New Zealand to be largely Smokefree by 2025. For this to be achievable, it is funding innovative projects targeting vulnerable populations experiencing high smoking prevalence. This project targets people with mental health issues (MHI) who on average smoke at a rate two to three times higher than the general population (Lawrence, Mitrou & Zubrick, 2009). Yet despite the likelihood of benefitting from more intensive stop-smoking support (Royal College of Physicians, Royal College of Psychiatrists, 2013), mental health service (MHS) users are less likely to receive smoking cessation advice (Ministry of Health, 2007). Moreover people with experience of MHI who smoke, are typically more nicotine- dependent and smoke more heavily than the general population (de Leon & Diaz, 2005). Further evidence of this disparity is that people with MHI consume around one third of all cigarettes sold in New Zealand (Tobias, Templeton, & Collings, 2008), yet they constitute only 16% of the New Zealand population (Ministry of Health, 2012).

Underpinning these inequities is an historical culture of acceptance and tolerance of tobacco use within MHS; for example smoking was an encouraged social activity and cigarettes were often used to reinforce desired behaviours within inpatient settings (Olivier, Lubman & Fraser, 2007). This culture is reflected in higher smoking prevalence rates for nurses working in MHS – 30% of female and 26% of male mental health nurses smoke (Edwards et al, 2008). This is important because staff who smoke are more likely to tolerate smoking behaviour, rather than providing smokefree support (Lawn & Pols, 2005). This culture is also evident today, when treatment for tobacco dependence continues to be a low priority in psychiatry and therefore a “missed opportunity” to improve the health and wellbeing of people with MHI who smoke (Siddiq, Douglas, & Adamson, 2015). Clearly, shifting a multi-layered culture of tobacco-use is a complex task; this will require attitudinal change across all mental health and addiction services (MH&AS) and a clear understanding of the barriers associated with “transitioning to a smokefree culture” (Glover et al., 2013, ).

The main aim of this innovative project is to engage a wide range of the MH&AS workforce in developing national best practice smokefree (SF) guidelines specifically for MH&AS, using a Systems First approach (Cowan & Smith , 2005).

Stakeholder engagement phase Data collection and data analysis
We recruited people from a wide range of roles from the MH&AS workforce (including management). MH&ASs from six district health boards, inclusive of their contracted MHS non-government organisations (NGOs) who participated: Hawke's Bay; Tairawhiti; Taranaki; Counties Manukau; Invercargill and Dunedin. During focus groups and interviews we asked, what works and what the specific challenges are, when supporting people with MH&A issues to be SF. A total of one hundred and forty-nine staff volunteered to participate in a total of forty-two data collection sessions (focus groups and key informant interviews). All focus groups and most interviews had two facilitators, and were digitally recorded. Facilitators recorded notes at each session. Initial themes were coded individually followed by a collaborative coding process.

Thematic analysis identified the following key themes as challenges:
• service users, staff and family support members perceive smoking behaviour as a stress reliever, a coping strategy, a means of control, a reward and as going hand-in-hand with MHI;
• inconsistent SF messaging and support (between staff within a MHS and across the MHSs accessed)
• undermines organisational SF commitment;
• stop working in silos – there is a need to systematically improve communication processes between and within MHS to enable seamless, quality SF support that is truly patient-centred rather than service-centric;
• there is a practice of prioritising the presenting MHI issue at the expense of addressing smoking harm; unsupported nicotine addiction leads to risky behaviour;
• role-modelling smoking behaviour undermines SF attempts; in general, more nursing staff perceive and practice SF as core business than medical staff (as a professional body).

The following themes were identified as things that worked well but required improving:
• All MHS staffs (nursing, medical and unregistered health professionals) need systematic, mandatory SF education during orientation and on-going refresher training;
• people with MHI need better access to a wider range of subsidised and/or free stop-smoking products that may come from settings outside health;
• SF support needs to concentrate on the benefits of being SF and less about health detriments - those most relevant to the person with MHI, for example, medication titration;
• staff perceive staff-smoking prevalence as reducing and more staff are making/being supported to make, SF attempts as a result of their organisation's SF commitment;
• people with MHI need access to meaningful activities to replace smoking behaviour that can transfer across settings;
• intergenerational smoking and maintaining a smoking habit hugely impact on families (financially and emotionally);
• it is important to build strong family support links to enable successful quit attempts;
• stop arguing about whose job it is to have the first SF conversation: it is important to recognise that every MHS setting has a responsibility to provide quality SF support regardless of the setting.

Overall much SF progress has been made within the MH&AS sector in New Zealand which is indicated by some staff and some services demonstrating a strong SF commitment. However, it is also clear that inconsistent SF practice and attitudes are continuing to undermine progress. We then asked - what does a MH&AS look like when it is providing effective SF support? As a result six SF principles were developed and form the basis of our culture change approach:
• All MH&AS settings will have mandated SF environment policies clearly outlining the organisation's SF expectations for service users & staff
• All staff will be mandated to receive & attend SF training during orientation & on-going refresher training at specified intervals
• All MH&AS users’ SF status is assessed as part of their full MH & wellbeing assessment
• All MH&AS users will have a shared SF support plan (if not SF)
• All staff will role model SF behaviour at all times & the organisation will have a range of measures in place to address non-compliance
• All MH&ASs will demonstrate how they will support their staff to become SF

Hawke's Bay demonstration phase
Due to the diversity of MH&ASs locally and regionally, it became clear that a one-size-fits-all culture change approach was not possible. We addressed this by securing commitment from eleven HBDHB and six NGO managers for their staff to participate in a working group. Based on the six SF principles, this group was tasked with developing the 'how to have a Smokefree Motivational Conversation' (SFMC) tool. Mandatory on-line smokefree training designed specifically to address the themes identified, went live in October 2014. It is important to note that education is only one component of a 'Systems First' approach. Further work involves setting up processes and systems, which monitor the extent to which the organisation as a whole, demonstrates smokefree commitment. In other words, while the desired change may be expressed through individuals, the focus will be primarily on organisational behaviour change. This requires the full support and participation of the entire MH&AS Leadership team.
Endorsement and peer review
We are seeking endorsement for this National MH&AS SF Best Practice Guidelines approach from a range of
key stakeholders. Expert peer review is being provided by Dr Hayden McRobbie (MOH Smoking Cessation
Expert and secondary care champion), Dr Mark Wallace-Bell (Behaviour Change Expert) and David Smith
(Systems First Expert). Peer review is being provided by a national Reference Group consisting of wide
representation from the MH&AS workforce.

Future project work
The aim of the demonstration phase is to facilitate and implement a local process that addresses the barriers
identified and provides a platform for delivering consistent, smokefree best practice support to our MH&AS
users. In the same way, a proposed national roll out of this culture change programme approach, aims to
achieve consistent national smokefree best practice.

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Managing suspected cancer in primary care in New Zealand: International study of barriers to access and general practitioner perspectives in cancer care

Han Win Htun¹, Mark Elwood¹, Ross Lawrenson², Tana Fishman³, Sally Ioannides¹
(hanwinhtun1@gmail.com)
¹Department of Epidemiology and Biostatistics, School of Population Health, University of Auckland
²Head of Waikato Clinical School, Faculty of Medical and Health Sciences, University of Auckland
³Department of General Practice and Primary Health Care, School of Population Health, University of Auckland

Issue
Cancer survival may differ between countries with similar systems of health care and wealth. Cancer outcomes are negatively associated with delays in the diagnostic pathway, from first presentation in primary care, through to waiting times for tests and specialist services. The International Cancer Benchmarking Partnership (ICBP) is an international study which aims to identify specific causes of performance differences and disparities in cancer outcomes between participating countries. Module Three of the ICBP focuses on beliefs, behaviours and systems of cancer management in primary care.

Aims
This study represents the New Zealand arm of the ICBP Module Three study. Study aims are:
1. To determine potential barriers to primary care access for the diagnosis of cancer, access to cancer investigations, and access to specialist review
2. To determine reasons for ethnic and geographic disparities in diagnosis and management of suspected cancer in primary care
3. To clarify general practitioner (GP) knowledge and attitudes regarding the management of suspected cancer

Methods
The study involves a national, self-administered, online survey of vocationally registered GPs, general-registrant doctors working in general practice, and GP registrars. The study is currently live, and participants are being recruited through snowball sampling and study advertising throughout the national GP networks (recruitment closed September 2014). The survey includes questions relating to participant and GP practice demographics, practice administration and organisation of appointments, GP cancer education and training, access to specialist advice, investigations and care, patient management and the use of cancer guidelines. Participants are also asked a series of patient vignettes relating to the diagnosis and management of suspected cancer.

Results
The study is in progress and will have complete data and results by October 2014.

Conclusions
The survey results will be part of the international study as well as provide a core body of knowledge to inform and improve local cancer pathways and services.

Implications
Knowledge of the patterns of cancer management in primary care in New Zealand will provide pivotal information to improve cancer outcomes. The study will contribute to improving cancer management in primary care by revealing the issues relating to diagnostic delays including inequalities, barriers to access and aspects of GPs knowledge and attitudes.
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