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RESEARCH REVIEW

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Issue 61 – 2016

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Greetings

Welcome to this issue of the Māori Health Review. Each issue attempts to bring you research relevant to the health and wellbeing of Māori. I welcome feedback and suggestions for papers/research to include in future issues and I'm pleased to hear and read about the excellent work being undertaken in Hauora Māori.

Nga mihi

Matire

Dr Matire Harwood

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Burden of disease from second-hand smoke exposure in New Zealand

Authors: Mason K, Borman B

Summary: These researchers used a comparative risk assessment method to estimate the burden of disease attributable to second-hand smoke in NZ, in terms of deaths (for 2010) and disability-adjusted life years (DALYs) (for 2006). Second-hand smoke was estimated to have caused 104 deaths in 2010, and led to the loss of 2,286 healthy years of life (DALYs) in 2006. Ischaemic heart disease accounted for the largest proportion of this health burden (1033 DALYs, 45% of DALYs). Most health loss in adults was fatal, particularly for ischaemic heart disease (86% fatal), stroke (79%) and lung cancer (98%). Children were disproportionately affected; they experienced 34% of the total health loss due to second-hand smoke in 2006, particularly from sudden unexplained death in infancy. Disparities in health impacts from second-hand smoke were also seen for Māori; they experienced five times the health loss from second-hand smoke as non-Māori, according to analyses that standardised for age differences.

Comment: As this research highlights we cannot afford to take our eye off tobacco control, particularly for Māori. Great to see the Government's budget announcement of an increase in tobacco taxes which will act as a disincentive (or incentive to quit!), building on the fantastic work of Dame Turia in this regard. However we should remember that we can all play a role in reducing smoking rates and second-hand smoke exposure.

Reference: *N Z Med J. 2016;129(1432):16-25*

[Abstract](#)

Community water fluoridation: attitudes and opinions from the New Zealand Oral Health Survey

Authors: Whyman RA et al.

Summary: The NZ Oral Health Survey, published in 2009, involved a nationally representative sample of 3,475 adults (aged ≥18 years). This study evaluated their responses to the questions about community water fluoridation. More than half (57.7%) of the respondents believed there are benefits to dental health from adding fluoride to drinking water and 31.7% did not know whether there are benefits. More than 45% of respondents did not know whether there were health risks from adding fluoride to drinking water. Overall, 42.0% of respondents were strongly or somewhat in favour of community water fluoridation. Māori, Pacific and Asian respondents were significantly more likely than other population groups to answer 'do not know' when asked about their support for fluoridation.

Comment: I think I'd take a different message from these results – that eliminating poverty and improving educational outcomes for Māori may improve their understanding about the benefits/risks of community water fluoridation, as well as their dental outcomes.

Reference: *Aust N Z J Public Health. 2016;40(2):186-92*

[Abstract](#)



Differences in breast cancer survival between public and private care in New Zealand: Which factors contribute?

Authors: Tin Tin S et al.

Summary: This analysis examined data from all women who were diagnosed with primary breast cancer in the Auckland and Waikato District Health Board Regions between June 2000 and May 2013. Patients who received public care for primary treatment, mostly surgical treatment, were compared with those who received private care in terms of demographics, mode of presentation, disease factors, comorbidity index and treatment factors. The analysis included 14,468 patients, 8,916 (61.6%) of whom received public care. Compared to patients treated in private care facilities, patients in the public sector were older, more likely to be Māori, Pacifica or Asian and to reside in deprived neighbourhoods and rural areas. Patients in the public sector were also less likely to be diagnosed through screening, less likely to be diagnosed with early staged cancer and to receive timely cancer treatments. They were more likely to have comorbidities. They were less likely to receive breast conserving surgery with radiotherapy but more likely to have mastectomy without radiotherapy, or no primary surgery, even after adjusting for stage at diagnosis and other tumour factors. They were also less likely to receive chemotherapy and hormonal therapy. Moreover, patients in the public sector had a higher risk of mortality from breast cancer (HR 1.95; 95% CI, 1.75 to 2.17), of which 80% was explained by baseline differences, particularly related to ethnicity, stage at diagnosis and type of loco-regional therapy. After controlling for these demographic, disease and treatment factors, the risk of mortality remained 14% higher in the public sector patients.

Comment: This paper addresses a common question raised in discussions about unequal treatment – does private care contribute to ethnic inequities in health care/outcomes. The authors' conclusion, that it makes a significant difference, is both interesting and useful.

Reference: *PLoS One.* 2016;11(4):e0153206

[Abstract](#)

Enlisting “Aunties” to support Indigenous pregnant women to stop smoking: Feasibility study results

Authors: Glover M et al.

Summary: This feasibility project tested the effectiveness of using Māori voluntary community health workers (“Aunties”) to identify and reach Māori pregnant women who smoke and provide cessation support. The majority of women were Māori, 20–30 years old, had their first cigarette within 30 minutes of waking and 58% had not tried to quit during the current pregnancy. Of the participants who completed a follow-up interview, 33% had stopped smoking while they were pregnant and 57% had cut down. At the follow-up interviews, the number of women who had used cessation support or products was increased from baseline.

Comment: Great to see the ‘Aunties’ being recognised for their role in health promotion and care. I understand that the Aunties were paid in this research project. It would be great if there was more formal support (such as income or training) for the countless Aunties out there who are supporting our whānau, without losing the essence of their knowledge and practice.

Reference: *Nicotine Tob Res.* 2016;18(5):1110-5

[Abstract](#)

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Whakawhanaungatanga: the importance of culturally meaningful connections to improve uptake of pulmonary rehabilitation by Māori with COPD – a qualitative study

Authors: Levack WM et al.

Summary: This study examined factors influencing the uptake and completion of pulmonary rehabilitation by Māori with chronic obstructive pulmonary disease (COPD) in NZ. Grounded theory nested within kaupapa Māori methodology was used to analyse transcripts from interviews and focus groups with 15 Māori and 10 NZ non-Māori invited to attend pulmonary rehabilitation for COPD. Māori participants had either attended a mainstream hospital-based programme, a community-based programme designed “by Māori, for Māori”, or had experienced both.

A number of factors influencing the uptake of pulmonary rehabilitation were common to all participants, regardless of ethnicity or background: 1) participants’ past experiences (e.g. of exercise; of health care systems), 2) attitudes and expectations, 3) access issues (e.g. time, transport, and conflicting responsibilities), and 4) initial programme experiences. These factors were moderated by the involvement of family or whānau and peers, interactions with health professionals, the way information on programmes was presented, and the experience of new illness events. For Māori participants, however, several additional factors were also identified relating to cultural experiences of pulmonary rehabilitation. In particular, many (but not all) Māori participants placed high value on whakawhanaungatanga within their pulmonary rehabilitation programmes: they sought regular opportunities to make culturally meaningful connections with the other people involved. If they perceived such opportunities as being absent in pulmonary rehabilitation programmes, these Māori participants felt dissatisfied, were less inclined to join, or felt disinclined to attend pulmonary rehabilitation. Only the more holistic services offered a programme in which they felt culturally safe and to which they were willing to return for ongoing rehabilitation.

Comment: Some more fantastic and practical research by and for Māori in the field of respiratory medicine.

Reference: *Int J Chron Obstruct Pulmon Dis.* 2016;11:489-501

[Abstract](#)

The fluid and electrolyte balance of New Zealand European and Māori/Pacific Island athletes: An observational study

Authors: McLean A et al.

Summary: This study recruited 20 Māori/Pacific Island (MP; body mass 100.97 kg) and 29 NZ European (NZE; body mass 89.11 kg) elite male athletes and compared the fluid-electrolyte balance by ethnicity. Sweat rates were determined by body mass change during a 1-h spin cycle exercise session. Analyses of sweat samples revealed mean sweat sodium concentrations of 73.4 mmol/L for the MP group and 55.5 mmol/L for the NZE group ($p=0.070$). The between-group differences were not significant for sweat rates (0.93 L/h for the MP group and 0.89 L/h for the NZE group; $p=0.357$) or fluid intakes (1.05 L and 0.93 L, respectively; $p=0.395$). Half of the MP group gained weight during the exercise session compared to 37% of the NZE group. Pre-exercise urine specific gravity was significantly lower amongst the NZE group than the MP group (1.016 g/mL vs 1.024 g/mL; $p=0.001$). During the exercise session, heart rate did not differ significantly between the groups ($p=0.082$).

Comment: An interesting study, particularly as someone who tends to focus at the other end of the health spectrum.

Reference: *Eur J Sport Sci.* 2016;16(3):336-43

[Abstract](#)

Independent commentary by Dr Matire Harwood

Dr Matire Harwood (Ngapuhi) has worked in Hauora Māori, primary health and rehabilitation settings as clinician and researcher since graduating from Auckland Medical School in 1994. She also holds positions on a number of boards, committees and advisory groups including the Health Research Council. Matire lives in Auckland with her whānau including partner Haunui and two young children Te Rangiuira and Waimarie.



Using a community based participatory research model within an indigenous framework to establish an exploratory platform of investigation into obesity

Authors: Bell R et al.

Summary: This group of researchers from the School of Physiotherapy, University of Otago, describes how they used the community-based participatory research (CBPR) paradigm to develop a methodological framework in an Indigenous context, to enable an interpretation of health and wellness in relation to obesity. They explain that their modified CBPR framework can serve as a platform to explore perceptions of wellness to facilitate improved health outcomes. Cultural values and beliefs held within a traditional Māori knowledge framework were embedded into the CBPR paradigm, as a way of identifying meaningful health promotion and prevention strategies. The modified framework positioned Māori as decision-makers at the forefront of the research process from conception through to implementation and analysis. The paper describes how acknowledging the research capacity of an Indigenous community and facilitating their leadership research role was seen as crucial in order to engage in a process aimed at investigating a priority public health issue. The researchers emphasise the importance of incorporating the following foundation elements when undertaking CBPR with an Indigenous community: [1] relationship building; [2] consultation and generation of an identified research area of need; and [3] formation of an Indigenous panel of expertise to provide leadership for all aspects of the research process.

Comment: Obesity rates are increasing in Aotearoa, but more so for Māori and Pacific peoples. It is increasingly recognised as a risk factor for heart disease, stroke, some cancers and of course diabetes. As a result, I believe that we will start seeing more research and health programmes targeting obesity in Māori communities. The findings from this research are therefore timely; and will be useful to researcher and practitioner.

Reference: *Obes Med.* 2016;2:19-24

[Abstract](#)

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Indigenous and tribal peoples' health (*The Lancet-Lowitja Institute Global Collaboration*): a population study

Authors: Anderson I et al.

Summary: This report into the health and wellbeing of Indigenous peoples worldwide was commissioned by *The Lancet* from Australia's Lowitja Institute. The report focusses on the health and wellbeing of more than 154 million Indigenous and tribal peoples from 28 populations across 23 countries. Experts in Indigenous health were identified for each country, which provided data on basic population, life expectancy at birth, infant mortality, low and high birthweight, maternal mortality, nutritional status, educational attainment, poverty and economic status. The report states that these data demonstrate poorer health and social outcomes for Indigenous peoples than for non-Indigenous populations. These poorer outcomes include: life expectancy at birth for 16 of 18 populations with a difference greater than 1 year in 15 populations; infant mortality rate for 18 of 19 populations with a rate difference greater than 1 per 1,000 livebirths in 16 populations; maternal mortality in 10 populations; low birthweight with the rate difference greater than 2% in 3 populations; high birthweight with the rate difference greater than 2% in 1 population; child malnutrition for 10 of 16 populations with a difference greater than 10% in 5 populations; child obesity for 8 of 12 populations with a difference greater than 5% in 4 populations; adult obesity for 7 of 13 populations with a difference greater than 10% in 4 populations; educational attainment for 26 of 27 populations with a difference greater than 1% in 24 populations; and economic status for 15 of 18 populations with a difference greater than 1% in 14 populations. The report advises that national governments need to develop targeted policy responses to Indigenous health, improving access to health services, and Indigenous data within national surveillance systems.

Comment: Congratulations to the many Indigenous researchers whose collaborative work was published in the *Lancet* last month; and was reported by the world's media. The data is not so pleasing. As pointed out by the editors, these are global health disparities among Indigenous peoples requiring global, political effort.

Reference: *Lancet*. 2016 Apr 20. [Epub ahead of print]

[Abstract](#)



Economic evaluation of Indigenous health worker management of poorly controlled type 2 diabetes in north Queensland

Authors: Segal L et al.

Summary: The Getting Better at Chronic Care Project (GBACC) was designed to improve the care of Indigenous adults with poorly controlled type 2 diabetes ($HbA_{1c} \geq 69$ mmol/mol) and ≥ 1 comorbidity living in 12 rural and remote north Queensland communities. Eighty-seven such people in 6 intervention communities received, in addition to standard primary care, intensive chronic condition management for 18 months, delivered by Indigenous health workers (IHWs) who had a Certificate III or IV in Aboriginal and/or Torres Strait Islander Primary Health Care. The IHWs received additional training in diabetes management and intensive support from the clinical support team. The Indigenous health worker-supported (IHW-S) model was family-centred and based on community outreach. A total of 106 patients in 6 usual care (UC) communities received input from a centre-based primary care team (nurses, general practitioners, IHWs, etc.), with less intensive IHW support. This paper reports the outcomes of a cost-consequence analysis for implementation of this intensive management, covering the period from 1 March 2012 to 5 September 2013. The mean cost of the 18-month intervention trial was \$AU10,060 per person (\$AU6,706/year). The intervention was associated with a nonsignificantly greater reduction in mean HbA_{1c} levels (-10.1 mmol/mol in the IHW-S group vs -5.4 mmol/mol in the UC group; $p=0.17$), a significant reduction in the proportion with extremely poor diabetes control ($HbA_{1c} \geq 102$ mmol/mol; $p=0.002$), and a sub-significant differential reduction in hospitalisation rates for type 2 diabetes as primary diagnosis (-0.09 admissions/person/year; $p=0.06$), with a net reduction in mean annual hospital costs of \$646/person ($p=0.07$). Quality of life utility scores declined in both groups (between-group difference, $p=0.62$) and both had high rates of disease progression (between-group difference, $p=0.73$).

Comment: See below.

Reference: *Med J Aust*. 2016;204(5):196

[Abstract](#)

Investigating the feasibility, acceptability and appropriateness of outreach case management in an urban Aboriginal and Torres Strait Islander primary health care service: a mixed methods exploratory study

Authors: Askew DA et al.

Summary: The Home-based, Outreach case Management of chronic disease Exploratory (HOME) study provided holistic, patient-centred multidisciplinary care for Aboriginal and Torres Strait Islander people with chronic disease. This paper describes outcomes of an initial evaluation of this model of care. Nine patients and one patient's spouse, as well as 15 health service staff participated in in-depth, semi-structured interviews. Patients and health service staff were very positive about the model of care. Over the 6 months of care, the patients became more involved in their health care, rates of depression declined significantly from baseline ($p=0.03$), and there were significant improvements in both systolic blood pressure ($p<0.001$) and diabetes control ($p=0.05$).

Comment: With regard to the first paper, although some may consider the results as 'proof' that intensive case management is not cost-effective, the authors have provided useful advice here. Many of the recommendations made (more integration with other services, higher case load) align with a Whānau Ora approach. I'd be keen to see an 'equity' and 'Indigenous' lens applied to any health economic analysis undertaken here.

The second paper confirms that case management can have significant impact on health outcomes for Indigenous people living with long-term conditions. There are differences between the populations of these two studies – including urban versus rural locations and health conditions. However, I think both provide useful information for health providers in Aotearoa.

Reference: *BMC Health Services Research*. 2016;16:178

[Abstract](#)

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