

Māori Health Review

Making Education Easy

Issue 18 – 2009

In this issue:

- *Ethnic disparities in ARF incidence*
- *Physical activity programmes good value*
- *Greener neighbourhoods = less obesity?*
- *Environments can promote good health*
- *Major disparities in CVD prevalence*
- *Modifiable CV risk factors in coronary care*
- *Audit of a CVD programme*
- *Improved BP monitoring and control*
- *Ethnic dietary intakes compared*
- *Disparities in depression treatment*

Tēnā tātou katoa

Kua mate a Takuta Paratene Ngata. He taniwha ia. Kua hinga he rata nui iroto i te aonui o Tane. Ko Paratene he tangata rongonui kei roto i te ao Māori, nga motu o Te Moananui.

Greetings

Welcome to this issue of the Māori Health Review.

Stay well, regards

Matire

Dr Matire Harwood

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Epidemiology of acute rheumatic fever in New Zealand 1996–2005

Authors: Jaine R et al

Summary: These researchers evaluated trends in New Zealand's acute rheumatic fever (ARF) incidence rates between 1996 and 2005 and the extent to which the disease is concentrated in certain populations based on age, sex, ethnicity and geographical location, using hospitalisation data (1996 through 2005) and population data from the 1996 and 2001 censuses. The annual ARF rate was 3.4 per 100,000 and concentrated by age group (in 5- to 14-year-olds), ethnicity (Māori and Pacific peoples) and geographical regions (upper North Island areas). From 1996 to 2005, the ARF rate decreased significantly in New Zealand European and Others but increased for Māori and Pacific peoples. Compared with New Zealand European and Others, rate ratios were 10.0 for Māori and 20.7 for Pacific peoples. Notably, 59.5% of all cases were Māori or Pacific children aged 5–14 years, who comprised only 4.7% of the New Zealand population.

Comment: Such research is startling and underpins the need to continue to carefully monitor this disease. There has been some success with prevention programmes in Northland (as reported in previous issues of Māori Health Research Review). The Rheumatic Fever Guidelines Group has also stressed the need for vigilance in Māori and Pacific children with sore throats (swab for and treat Strep throat). Despite such measures, disparities are increasing. Urgent attention is required.

Reference: *J Paediatr Child Health*. 2008;44(10):564-71

<http://tinyurl.com/9ldwnm>

Latest statistics on the Māori health workforce and Māori secondary students studying year 11 to 13 science.

The Māori Health website has now been updated with 2004 to 2007 statistics on Māori in the regulated health workforce as well the participation and attainment of Māori in Year 11 to 13 science subjects. It is important to monitor the number of Māori in the health workforce and Māori studying sciences in years 11 to 13 to ensure that progress is being made.

To view or download the data visit www.maorihealth.govt.nz

Cost effectiveness of community-based physical activity interventions

Authors: Roux L et al

Summary: A lifetime cost-effectiveness analysis was developed to evaluate the costs, health gains, and cost-effectiveness (dollars per quality-adjusted life year [QALY] gained, relative to no intervention) of seven population-wide strategies to promote physical activity in healthy adults. All of the interventions were found to be cost-effective in reducing coronary heart disease, ischaemic stroke, colorectal and breast cancers, and type 2 diabetes. Cost-effectiveness ratios ranged between \$US14,000 and \$US69,000 per QALY gained, relative to no intervention.

Comment: A useful paper for people working in the area of 'physical activity'. Provides some great examples of community-based initiatives and also evidence for their effectiveness.

Reference: *Am J Prev Med.* 2008;35(6):578-88

<http://tinyurl.com/9qb9o9>

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Neighborhood greenness and 2-year changes in body mass index of children and youth

Authors: Bell JF et al

Summary: This study sought to determine whether greenness and residential density were independently associated with 2-year changes in the BMI of 3831 children and youth aged 3–16 years who lived at the same address for 24 consecutive months and received well-child care from a US-based clinic network between 1996 and 2002. According to multiple linear regression analyses, those living in greener neighbourhoods had lower BMI z-scores in Year 2, regardless of residential density characteristics. Higher greenness was also associated with lower odds of BMI z-scores increasing over the 2-year study period (OR, 0.87).

Comment: See below.

Reference: *Am J Prev Med.* 2008;35(6):547-53

[http://www.ajpm-online.net/article/S0749-3797\(08\)00734-4/abstract](http://www.ajpm-online.net/article/S0749-3797(08)00734-4/abstract)

Effect of exposure to natural environment on health inequalities: an observational population study

Authors: Mitchell R and Popham F

Summary: These researchers compared income-related health inequality in areas of England with different amounts of green space. Individuals younger than retirement age were divided into groups on the basis of income deprivation and access to green space. Mortality data for 2001–05 revealed that the populations with the most access to green space had the weakest associations between income-related deprivation and both all-cause and circulatory disease mortality. The investigators estimated that areas with the most green space saved 1,328 lives per year in the three lower income quartiles. Green space did not have any effect on deaths from lung cancer ($p=0.0996$) or intentional self-harm ($p=0.1030$).

Comment: I have included these studies together to show the importance of urban planning in terms of impact on health for both children and adults. As the first study showed, it's not just a matter of having local 'safe' or dedicated spaces for exercise (such as walking paths or gyms); children are more likely to be active when there is green space, presumably reflecting their desire to play/run/kick balls/etc outside! 'Green space' also appears to be associated with reduced inequalities in adult death rates from specific disease (such as heart disease and stroke) across levels of deprivation. It should be noted, however, that disparities, although reduced, still persist. Therefore, attention to both the provision of green space and level of deprivation is required to improve wellbeing.

Reference: *Lancet.* 2008;372(9650):1655-60

<http://tinyurl.com/6yjemd>

Independent commentary by Dr Matire Harwood, Medical Research Institute of New Zealand.

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Maire's comments for the next four papers:

I have grouped these 4 papers together in order to show how we can usefully link research findings, particularly when the research is NZ-based:

1. The prevalence of CVD in Māori (based on hospital coding, death certificates and prescriptions) is about twice that of non-Māori.
2. For those presenting to hospital with an acute CVD event, people who identified as Māori, were younger, or who lived in more deprived neighbourhoods were more likely to have modifiable risk factors. One conclusion is that screening and/or management of CVD risk, normally undertaken in primary care, is currently inadequate for these particular groups.
3. The third study found that one way to improve screening rates in

primary care setting was the introduction of an electronic tool to assist GPs. However, despite improved screening rates amongst GPs in this PHO, CVD risk factors continue to be poorly managed (i.e. targets for BP and lipids levels weren't met). This is in keeping with international research. More needs to be done to encourage/support GPs to manage CVD risk factors better.

4. The UK-based researchers in the final paper have attempted to do just that – improve screening for and management of CVD risk factors. The introduction of financial incentives for GPs in the UK in 2004 appears to have not only improved BP monitoring and control but also to be associated with reduced disparities. This may be an item for PHOs to consider further.

1. Ethnic and socioeconomic disparities in the prevalence of cardiovascular disease in New Zealand

Authors: Chan WC et al

Summary: This study used national hospitalisations and mortality datasets between 1998 and 2007 and the National Pharmaceutical data collection from 2001–2007 to describe the prevalence of cardiovascular disease (CVD) in New Zealand by ethnicity and socioeconomic status. In 2007, Māori had the highest age-standardised prevalence (7.41%) compared to non-Māori, non-Pacific, and non-Indians (4.45%). Māori males and females had the highest age-specific prevalence of CVD across virtually all age groups. People living in most deprived areas had consistently higher age-specific CVD prevalence than people living in less deprived areas. The corresponding age-specific CVD prevalence among the least deprived quintile of Māori and the most deprived quintile of 'Other' New Zealanders were almost identical up to 79 years of age. Between ages 40–59 years, the most deprived quintile of Māori had consistently $\geq 240\%$ higher CVD prevalence than the least deprived quintile of 'Other' New Zealanders.

Reference: *N Z Med J.* 2008;121(1285):11-20
<http://www.nzma.org.nz/journal/abstract.php?id=3341>

2. The burden of modifiable cardiovascular risk factors in the coronary care unit by age, ethnicity, and socioeconomic status—PREDICT CVD-9

Authors: Kerr AJ et al

Summary: Using data from patients presenting to Auckland's Middlemore Hospital Coronary Care Unit with an acute cardiovascular disease (CVD) event from July 2004 to June 2006, this study investigated the burden of modifiable CVD risk factors by age, ethnicity, and socioeconomic status. Of 973 patients, 34% were < 55 years and 10% were < 45 years, 24.8% were women, and 44.6% lived in areas classified as most deprived. 61.5% were European/other, 13.0% NZ Māori, 15.2% Pacific, and 10.3% South Asian. Younger patients, regardless of ethnicity, were much more likely to be smokers, be obese, have elevated LDL and triglyceride, and low HDL levels. Across the age range, Māori and Pacific patients were more likely than European/other patients to smoke, have diabetes, obesity, elevated triglycerides, and low HDL. Increasing deprivation was associated with more smoking, obesity, hypertriglyceridaemia and diabetes, with the excess of smoking and obesity being most pronounced in younger patients.

Reference: *N Z Med J.* 2008;121(1285):20-33
<http://www.nzma.org.nz/journal/abstract.php?id=3340>

3. Cardiovascular risk management at a Māori-led Primary Health Organisation—findings from a cross-sectional audit

Authors: Peiris D et al

Summary: Outcomes are reported from an electronic cardiovascular disease (CVD) risk assessment programme conducted over 12 months (between December 2006 and November 2007) at Tāmaki Healthcare, Auckland. Of 1522 people screened, clinical data were available for 1420, 425 (30.0%) of whom had a clinical or calculated 5-year CVD risk of $\geq 15\%$. Māori were significantly more likely to be at high CVD risk than non-Māori (OR, 2.07; $p \leq 0.001$). Despite high smoking rates and diabetes among Pacific peoples, there was not an overall increased likelihood of high CVD risk. For people at high CVD risk, across all ethnicities, prescribing rates were 78.1% for blood pressure lowering, 71.9% for lipid lowering, 65.3% for antiplatelet, and 50.3% for all three therapies. Of 451 people with either diabetes or established CVD, 65.9% and 66.1% were not attaining target blood pressure and lipid level recommendations respectively or were not prescribed guideline indicated therapies.

Reference: *N Z Med J.* 2008;121(1285):35-46
<http://www.nzma.org.nz/journal/abstract.php?id=3344>

4. Effect of social deprivation on blood pressure monitoring and control in England: a survey of data from the quality and outcomes framework

Authors: Ashworth M et al

Summary: This UK study aimed to assess the level of BP monitoring and control among adult (≥ 45 years) primary care patients with chronic conditions attending general practices and sought to determine the effect of social deprivation on these levels. Data were retrospectively obtained from 8515 general practices in year 1 (2005), 8264 in year 2 (2006), and 8192 in year 3 (2007), located in the least deprived and most deprived areas of England. The proportion of patients who had a BP recording in the least deprived areas increased from 83% in 2005 to 88% by 2007, and from 81% to 88% in the most deprived areas. An initial 1.7% gap observed in mean BP recording levels between practices in the least and most deprived areas had decreased to 0.2% by 2007. In 2005, target BP levels were achieved by 69% and 72% of hypertensives in least deprived versus most deprived areas; corresponding rates were 71% and 69% for diabetics, and 85% and 82%, respectively, for coronary heart disease (CHD) patients. By 2007 these rates had increased to 77% and 78% for hypertensives, 79% and 79% for diabetics, 89% and 88% for CHD patients in the least versus most deprived areas respectively. Similar improvements in achieving target BP levels were seen for cerebrovascular disease and chronic kidney disease.

Reference: *BMJ.* 2008;337:a2030
http://www.bmj.com/cgi/reprint/337/oct28_2/a2030

Dietary intakes of European, Māori, Pacific and Asian adults living in Auckland: the Diabetes, Heart and Health Study

Authors: Metcalf PA et al

Summary: Daily nutrient intakes of 4007 European, Māori, Pacific, and Asian people aged 35 to 74 years living in Auckland were calculated from a self-administered food frequency questionnaire completed by participants during a health screening study carried out between 2002 and 2003. Compared with Europeans, Māori and Pacific men had higher total energy intakes per day, while Asians had lower intakes. The pattern was similar for carbohydrate and fat consumption. While protein and cholesterol consumption tended to be lower in Europeans than the other three ethnic groups, alcohol consumption and calcium intakes were highest among Europeans. Notably, expressing nutrient consumption as the percentage contribution to total energy intake attenuated many of the differences between ethnic groups, indicating that total food consumption was the major determinant of ethnic differences in nutrient intakes.

Comment: The recent NZ Health Survey results showed that rates of obesity were highest amongst Māori and Pacific adults and children than non-Māori/Pacific people. However, obesity rates are rising more quickly with time amongst the non-Māori/Pacific people, suggesting that Māori are currently tackling this issue better! The results from this survey could lead to the development of further targeted strategies including education about serving size, which contributed most to larger calorie intakes for Māori and Pacific men.

Reference: *Aust N Z J Public Health*. 2008;32(5):454-60

<http://tinyurl.com/9w7gtr>

Disparity in depression treatment among racial and ethnic minority populations in the United States

Authors: Alegria M et al

Summary: Pooled data were analysed for 8762 adults from 3 national surveys in this evaluation of differences in access to and quality of depression treatments between patients in racial-ethnic minority groups and non-Latino white patients. Among those with a past-year depressive disorder, 40% of non-Latino whites did not access any treatment, compared with 69% of Asians, 64% of Latinos, and 59% of African Americans. Disparities in the likelihood of both having access to and receiving adequate care for depression were significantly different for Asians and African Americans in contrast to non-Latino whites. The researchers conclude that *“populations reluctant to visit a clinic for depression care may have correctly anticipated the limited quality of usual care”*.

Comment: I particularly like the last sentence of the abstract, which is directly quoted in the summary here. It is pleasing to see researchers shift their paradigms about access as only a structural or patient-related problem and start to consider the role of quality of care and provider preference in the delivery of that care. The next step is to look at ways to improve quality, including the behaviours of providers.

Reference: *Psychiatr Serv*. 2008;59(11):1264-72

<http://tinyurl.com/9ongez>

Disclaimer: This publication is not intended as a replacement for regular medical education but to assist in the process. The reviews are a summarised interpretation of the published study and reflect the opinion of the writer rather than those of the research group or scientific journal. It is suggested readers review the full trial data before forming a final conclusion on its merits.

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The Ministry of Health has summarised the Rauringa Raupa research into two short booklets -

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