Māori Health Review

Making Education Easy Issue 2 - 2007

In this issue:

Tena koutou katoa

Nau mai ki te putanga tuarua o te Tirohanga Rangahau Hauora Māori. He Tuhituhi hirahira e paa ana ki nga kaupapa rangahau me nga take o naianei, mo ia marama.

Kei te tino hari koa maatou ki nga whakautu mo te putanga tuatahi. A kei te maioha hoki ki o koutou uru pare. Te tumanako ka kitea i a koutou te pai ano o tenei putanga.

Ki a mahara, kei te hiahia maatou ki te rongo, a ki te kite i nga paanui, a tuhituhi rangahau, e painga mo taatou e mahi ana i te Hauora Māori. Tonoa mai, ma maatou e whiriwhiri - mo nga putanga, kei te heke mai.

Noho ora mai

Na Dr Matire Harwood (Nga Puhi)

Welcome to the second edition of Māori Health Review, a unique publication bringing you current and important research topics each month.

We have been delighted with the response to issue 1 and appreciate your feedback, I hope that you find this issue just as stimulating. Please remember that we wish to hear about papers or research that may be of interest for those of us working in Māori health. So send them through and we will consider them for future editions.

Regards

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Assessing differences in CVD risk and risk management for Māori and non-Māori

Authors: Riddell T et al

Summary: PREDICT-CVD is an opportunistic cardiovascular risk assessment and management programme. This study compared the cardiovascular disease risk factor status and risk management of Māori with non-Māori using data from over 20,000 PREDICT-CVD assessments carried out between 2002 and 2006. The population assessed comprised 1,450 (7%) Māori and 19,164 non-Māori (93%). At assessment, Māori were an average of 3 years younger than non-Māori. Compared to non-Māori, Māori patients had higher rates of cardiovascular risk factors including smoking and diabetes. Blood pressure and TC/HDL levels were also higher in Māori patients. Māori with a history of CVD were more likely to receive medications including anticoagulants, blood pressure-lowering and lipid-lowering drugs. However revascularisation procedures were 50% less likely to be received by Māori compared to non-Māori with a history of ischaemic heart disease.

Comment: PREDICT-CVD was developed as an aid for GP's to assess and manage CVD risk. It has been shown to improve risk assessment and risk factor documentation. For primary care services utilising PREDICT-CVD in Auckland, it appears to improve the drug based management of CVD for Māori but Māori with IHD received significantly fewer revascularisation procedures than non-Māori, a finding that is consistent with other studies. The large cohort, quality of information and robust analysis of data signal that we will hear more about this study in the future.

Reference: JNZMA. 2007; 120(1250)
http://www.nzma.org.nz/journal/120-1250/2445/

The efficacy of bupropion in the Māori population

Authors: Holt S et al

Summary: Around 50% of adult Māori in New Zealand are smokers, as compared to around 20% of European New Zealanders. This randomised, placebo-controlled trial assessed the efficacy of bupropion as an intervention for smoking cessation in 134 Māori smokers (> 10 cigarettes/day) aged 16-70 years. Continued abstinence from smoking at 3 and 12 months were the primary outcome measures. At 3 months, continued abstinence was higher with bupropion (44.3%) than placebo (17.4%), RR 2.54 (95% CI 1.30-5.00). At 12 months abstinence rates were 21.6 and 10.9% for the bupropion and placebo groups respectively, RR 1.99 (95% CI 0.79 to 5.00). In conclusion, the authors suggest that bupropion is an effective treatment for smoking cessation in the indigenous Māori population in New Zealand.

Comment: The motivation for this study came about after a conversation with Tariana Turia, the Assoc Minister for Health at the time. She sought evidence that bupropion was an effective treatment for smoking cessation in Māori. What followed was this study, the first RCT with Māori only participants. Despite evidence that bupropion is effective in helping Māori to quit smoking it is not subsidised. The researchers, participants and those working in Auahi kore programmes are understandably disappointed that a significant cost barrier to an effective treatment exists.

Reference: Thorax. 2005; 60(2):120-3

http://thorax.bmj.com/cgi/content/full/60/2/120

Unequal impact: Māori and non-Māori cancer statistics

Authors: Robson B et al

Summary: This comprehensive report from the Ministry of Health details cancer findings, including disparities in incidence and outcomes between Māori and non-Māori for the period 1996 to 2001. Māori ethnicity was classified using the ‘ever Māori’ approach. Māori were 18% more likely to be diagnosed with cancer than non-Māori, and were almost twice as likely to die from their illness. Māori were less likely to have their cancer stage recorded at diagnosis, and with regard to breast, lung, colon, rectum, cervix, prostate, testis, kidney, oral cancers and melanoma were more likely to be diagnosed at a later stage of the illness. The only cancer which was detected earlier in Māori was stomach cancer. In general, Māori have lower rates of survival for cancers. Some, but not all of this disparity may be related to the later detection of the cancers. In conclusion, the report finds; “the existence of stark disparities in experiences and outcomes of cancer between Māori and non-Māori” which indicates the need for “urgent and committed action” to address these issues.

Comment: The Cancer Chart book provides comprehensive and detailed information on cancer among Māori. The findings raise interesting questions about the quality of care along the entire cancer care pathway for Māori: from prevention through diagnosis, staging and treatment. For example, Māori have a lower likelihood of having their stage of cancer at diagnosis recorded. Why? And does this impact on treatment options for Māori with cancer? Other issues not covered in the document but of equal importance to Māori include participation in cancer research (often providing new treatments and technologies), whanau ora (support for whanau, financial burden of caring for someone with cancer and changing roles within the whanau) and palliative care. Disparities in experiences and outcomes of cancer between Māori and non Māori exist, the greatest impact being on Māori individuals and communities. Urgent and committed action is necessary to address the issues raised by the researchers.

Reference: Robson B, Purdie G, Cormack D. 2006. Unequal Impact: Māori and Non-Māori Cancer Statistics 1996–2001. Wellington: Ministry of Health

http://www.Māorihealth.govt.nz/moh.nsf/pagesmh/4761?Open

Cardiovascular rehabilitation – does it work for Māori?

Authors: Wihongi H et al

Summary: Māori are less likely to use cardiovascular rehabilitation services than other ethnicities, despite far greater rates of cardiovascular morbidity and mortality. The authors report on the first 6-months of a specialist mobile cardiovascular rehabilitation service provided by Te Kohao Health and based on Kirikiriroa marae. Data were collected from clinical and support assessment tools, client case notes, minutes from meetings and kanohi ki te kanohi (face to face) discussions with staff. Māori referred to the service presented with complex socioeconomic and socio-cultural issues. In general Māori accessing the service were younger than comparable Pakeha. Retention rates were higher for this service than for other cardiovascular rehabilitation services. The authors suggest that the success of this service may be as a result of providing a multi-faceted approach addressing the need for cultural support combined with clinical services.

Comment: A great study undertaken by up and coming researchers, Helen, Nina and Te Aro describe the reality of Māori using a mobile cardiovascular rehabilitation service. Although data was from just the first 6 months since implementation of the service, the results are positive and provide evidence that a service tailored to Māori does work.

Reference: Presented at PRIDOC, Rotorua, December 6-10 2006

http://www.conference.co.nz/index.cfm/pridoc2006/Programme

Te Rau Hinengaro: The New Zealand Mental Health Survey: The Māori Data

Authors: Baxter J et al

Summary: This nationally-representative, face-to-face survey examined aspects of high frequency mental disorders including mood disorders, anxiety disorders, and alcohol and drug abuse disorders. A version of the Composite International Diagnostic Interview (CIDI 3.0), amended for use in the World Health Organisation, World Mental Health Survey Initiative was used. This report presented the data from over 2500 Māori surveyed. Prevalence of mental disorders was high for Māori (12-month prevalence 29.5%). Severity was described as moderate or severe for 75% of illnesses occurring in the past 12 months. High rates of co-morbid mental and chronic physical disorders were also described. Rates of significant suicidal thinking (3.8 %), suicidal plans (1.3%) and suicide attempts (0.7%) were significant. However uptake of specific health or other services was low.

Comment: There is potential for epidemiological research in mental health to be undertaken in a way that further marginalises Māori. Too often the focus or 'gaze' has been on the individual and important external factors that contribute to ethnic differences in mental health rates and outcomes are ignored. As the authors rightly point out in this paper, it is vital that Māori lead the research process (including design, recruitment, analysis and dissemination of results) for studies of this kind to ensure that it is safe for Māori.

Reference: Presented at PRIDOC, Rotorua, December 6-10 2006

http://www.conference.co.nz/index.cfm/pridoc2006/Programme

People like me: a survey of Māori experiences of health services

Authors: Jansen P et al

Summary: This was a multi-stage study of Māori patient experiences and perceptions with regard to health, disability and ACC services. Thematic analysis of data collected from 10 nationwide hui was used to develop a model of Māori patient interactions with healthcare providers. This led to the creation of an 'experiences of care' survey tool which was used in a telephone survey of 651 Māori. Many Māori have concerns about interactions with health services and the cultural competence of providers, although most rated their most recent experience as generally good. A cluster analysis found two distinct groups of respondents. Those of younger age (78%) were more likely to report positive experiences with service providers, whilst the older age-group (22%) were less likely to consider returning again. The authors suggest that this may be explained by factors such as; "poor experiences in health or other services, expectations of lesser quality care and barriers such as a lack of cultural fit between the patient and provider."

Comment: A comprehensive study that sought the experience of Māori using health, disability and ACC services, Dr Jansen (Raukawa) and others at Mauri Ora describe the importance of the patient:provider interaction. One important outcome from the study was the development of a tool to measure the 'satisfaction' of Māori utilising health, disability and ACC services. Currently limited to tools that have been developed overseas or in other populations, providers may wish to consider using such a tool. It was developed by and for Māori and was validated during the study.

Reference: Presented at PRIDOC, Rotorua, December 6-10 2006

http://www.conference.co.nz/index.cfm/pridoc2006/Programme

Māori and non-Māori differences in caesarean section rates

Authors: Harris R et al

Summary: National total, acute and elective caesarean section (CS) rates (as proportions of women giving birth in New Zealand hospitals during 1997-2001) were used to examine relationships between CS, deprivation and ethnicity. Logistic regression analysis was used to adjust for age, deprivation, some clinical factors, and District Health Board. In comparison to Māori, total, acute and elective rates of CS were significantly higher in non-Māori women (21 vs 13%; OR 1.59; $p < 0.0001$ for total CS). Increasing deprivation was correlated with decreasing rates of CS. Differences between Māori and non-Māori remained after controlling for age, deprivation and other factors. The authors concluded that although deprivation may contribute to the differences observed, it does not fully explain them, and suggest that further research is warranted.

Comment: A controversial topic, Harris and colleagues looked at rates of caesarean sections (CS) and showed differences between Māori and non Māori for total, elective and acute CS. Non Māori women were more likely to have CS than Māori women. Although there is support for the delivery of baby without intervention, we note that CS are necessary in certain circumstances to ensure the best possible outcomes for mother and baby and can prevent maternal and neonatal mortality or morbidity. As the authors suggest, we need to know whether ethnic differences in CS rates are associated with ethnic differences in maternal and neonatal outcomes. Further research is required.

Reference: JNZMA. 2007; 120(1250)

http://www.nzma.org.nz/journal/120-1248/2444/

Risk-taking: behind the warrior gene story

Authors: Merriman T and Cameron V

Summary: This report examines the scientific evidence behind the recent controversial claim by Lea and colleagues (see below for a link to the on-line abstract) that the low activity variant of the monoamine oxidase-A (MAO-A) gene was strongly associated with risk-taking and aggressive behaviour in Māori. The MAO-A gene is believed to be important for the correct regulation of dopamine and serotonin levels, via the production of the MAO-A enzyme which breaks down both neurotransmitters. The high activity gene variant (found in 65% of Caucasians) has up to a 10-fold greater activity than the low activity variant, and may therefore be more effective in removing excess dopamine and serotonin. In MAO-A deficient mice (which lack the enzyme entirely), dopamine and serotonin levels are increased and aggressive behaviours have been observed. The term "warrior gene" was first coined following a small, un-replicated experiment using Rhesus macaque monkeys. No evidence for an association between genotype alone and aggressive behavior was found in this study, and aggressive behaviour could be predicted by both low and high-activity gene variants under different environmental conditions. In the three largest population-based studies in humans (all in Caucasians) the results were all similar and suggested the high-activity MAO-A variant may be protective against adult anti-social behavior for children who were abused or neglected. The low-activity variant did not predict aggressive behaviour unless these additional environmental factors were also considered. The study presented by Lea et al. was conducted in a very small (n = 17) sample of Māori males. They found the low-activity MAO-A variant present in 60% of subjects, and called it the "warrior allele", suggesting it was strongly associated with risk taking and aggressive behaviour in Māori males. The authors of the current report, dispute this finding, citing a lack of scientific rigour and an absence of appropriate genetic epidemiological experiments testing for an association. They also point to evidence of racial variation between genetic associations indicating that results from a Caucasian population should not be extrapolated to Māori.

Hall D, Green M, Chambers G, Lea R. Tracking the evolutionary history of the warrior gene in the South Pacific. 11th International Human Genetics Meeting, Brisbane, Australia; August 6–10; 2006. Abstract at URL: http://www.ichg2006.com/abstract/843.htm

Comment: See comment on right.

Reference: JNZMA. 2007; 120(1250)

http://www.nzma.org.nz/journal/120-1250/2440/

Warrior genes and risk-taking science

Authors: Crampton P and Parkin C

Summary: : In this article, the authors summarise their concerns with regard to the veracity and ethics of the "warrior gene" line of research. They raise concerns with regard to the informed consent process. In line with ethical principals of research, all participants should have been advised that the research included the exploration of hypotheses linking the "warrior gene" with violent and antisocial behaviour, and that results may be extrapolated from the research participants to the larger Māori population despite the lack of evidence for association between the two. The authors ask questions about the scientific validity of an approach which has extrapolated from a small, likely non-random sample of Māori males to not only the entire contemporary male Māori population, but also to past generations. They also point to a lack of any association between genotype alone and anti-social behaviour from previous research and the risks of making a claim of causality on the evidence of association alone. Finally, the authors highlight the issue of skewed reporting and hype by the media, and comment that; "In such highly charged social and political settings, the scientist has a particular responsibility for the way in which findings are disseminated and for ensuring a clear public understanding of the limitations of the work to date."

Comment: Dr Rod Lea claimed in August 2006 that there is a genetic explanation for negative social and health statistics for Māori. Dubbed the warrior gene, Dr Lea stated that the low-activity MAO-A genetic variant "goes a long way to explaining some of the problems Māori have…they are going to be more aggressive and violent and more likely to get involved in risk-taking behaviour like gambling". Unfortunately, information about the research came mainly via the media and the reports were sensationalised, simplified and from the perspective of Dr Lea and his team. The media were quick to point to Māori and our genes as reasons to explain negative statistics. Not only were the wider, external issues ignored but scientists, ethicists and Māori were not given the opportunity to voice their concerns about the study. Thankfully, we have now been provided with expert opinions around the science and ethics of Dr Lea's work in the latest NZMJ. Dr Merriman and Dr Cameron question the scientific validity of Lea's genetic studies and Professor Crampton and Dr Parkin raise important ethical concerns. If you are considering large scale genetic research in your whanau, hapu or iwi, it would be useful to read the articles in their entirety. Aroha Mead and Moana Jackson have also critiqued genetic research undertaken by Dr Lea and others using a Kaupapa Māori epistemology. Their presentations were recorded at HRC's Hui Whakapiripi and Pridoc in 2006. Some Iwi (Ngai Tahu for example) already have guidelines in place for DNA research and it may be useful to consider the development of guidelines or recommendations prior to participation in research in which DNA samples are taken.

Reference: JNZMA. 2007; 120(1250)

http://www.nzma.org.nz/journal/120-1250/2439/

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