Māori Health Review™

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In this issue:

Abbreviations used in this issue
BMI = body mass index
DHB = district health board

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Ngā mihi
Matire
Dr Matire Harwood
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Face-to-face versus telephone delivery of the Green Prescription for Māori and New Zealand Europeans with type-2 diabetes mellitus: influence on participation and health outcomes

Authors: Williams M et al.

Summary: This kaupapa Māori-informed study randomised 68 Māori and 70 NZ Europeans newly diagnosed with type 2 diabetes to face-to-face (n=70) or telephone (n=68) delivery of the national Green Prescription lifestyle programme for 6 months. At the first face-to-face meeting (used as the Green Prescription information session), all study participants agreed to participate in the programme. Throughout the study, there were small but clinically favourable improvements in health outcomes for both Māori and NZ Europeans, regardless of the mode of delivery, face-to-face or telephone. At 6 months there were overall reductions from baseline in body weight (1.8 kg), waist circumference (3.7 cm), total cholesterol (0.6 mmol/L) and glycated haemoglobin (3.1 mmol/mol). No significant differences were observed in regard to mode of delivery, ethnicity or gender. Drop-out at 6 months was greater for Māori than for NZ Europeans (49% vs 24%; p=0.04). Overall attrition rates for the face-to-face and telephone approaches were 31% and 41%, respectively (p=0.509).

Comment: This paper serves as a reminder that Green Prescriptions achieve clinically significant changes for all. Although a low-cost and simple intervention delivered in the community, inequities in access to the Green Rx (i.e. referrals made and follow-up) do exist. We must address the barriers such as reluctance to refer or poor follow-up, as these prevent some people from receiving evidence-based treatment.

Reference: N Z Med J. 2017;130(1465):71-9
Abstract

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Metabolic monitoring in New Zealand district health board mental health services

Authors: Staveley A et al.

Summary: This audit sought to determine policies adopted by NZ DHBs for monitoring metabolic parameters for people with serious mental disorders treated with second-generation antipsychotic medications. Such medications can contribute to metabolic complications and are associated with weight gain, increased triglyceride levels, reduced HDL levels and impaired glucose metabolism. After reviewing the current literature and published guidelines relevant to metabolic syndrome, the study researchers proposed a best practice guideline, combining the 2009 'harmonised' definition developed by international cardiac and metabolic health organisations, with recommendations for frequency of monitoring. All 20 DHBs and one private clinic participated in the audit, which analysed metabolic monitoring policies in relation to the best practice standard. Fourteen DHBs were found to have a metabolic monitoring policy. There was considerable variation among the policies as to size (number of pages) of policies, the extent of information about metabolic syndrome contained in the policies, and their clarity when being implemented by clinicians. Only 2 of the 14 policies included a complete set of cut-off values, consistent with the literature-based guideline. Eight policies specify actions to be taken when consumers meet criteria for metabolic syndrome. Four DHBs have systems for measuring their rates of metabolic monitoring. The study researchers recommend that the Ministry of Health adopt a best practice standard in this area, and require DHBs to report against this standard.

Comment: An excellent example of a clinical audit. The next step though is to improve quality of care. Other questions for me included the role of primary care in this space, and whether a similar audit has occurred for smoking ABC.

Reference: N Z Med J. 2017;130(1465):44-52
Abstract

Breastfeeding indicators among a nationally representative multi-ethnic sample of New Zealand children

Authors: Castro T et al.

Summary: This analysis examined breastfeeding data from the *Growing Up in New Zealand* longitudinal study. Of 6,685 enrolled singletons, breastfeeding was initiated for 97% of the children. Sixteen percent were exclusively breastfed to age 6 months and 13% were breastfed to age 24 months. Exclusive breastfeeding for ≥4 months was less likely for children of mothers of Māori (RR 0.80; 95% CI, 0.73 to 0.87), Pacific (RR 0.90; 95% CI, 0.83 to 0.98) or Asian (RR 0.80; 95% CI, 0.74 to 0.86) ethnicity. Children who were more likely to be exclusively breastfed for ≥4 months were born to mothers aged 20–29 years (RR 1.24; 95% CI, 1.04 to 1.49), ≥30 years (RR 1.36; 95% CI, 1.14 to 1), those with a tertiary education (RR 1.14; 95% CI, 1.08 to 1.21), or planned pregnancy (RR 1.14; 95% CI, 1.08 to 1.21) and were from families with older siblings (RR 1.31; 95% CI, 1.17 to 1.47). Children were more likely to be breastfed ≥6 months if their mother was aged 20–29 years (RR 1.26; 95% CI, 1.10 to 1.45) or ≥30 years (RR 1.40; 95% CI, 1.22 to 1.61), had a tertiary education (RR 1.11; 95% CI, 1.06 to 1.59), or planned pregnancy (RR 1.11; 95% CI, 1.06 to 1.15), or if they had older siblings (RR 1.04; 95% CI, 1.00 to 1.08).

Comment: Breastfeeding can be challenging, particularly when returning to work, when there are other stressors, when mastitis occurs and when there are difficulties with latching. It is wonderful to see so many of our MPs breastfeeding in their workplace, and I've certainly had the privilege to be able to breast feed/pump at work or in meetings. However, this isn't true for all. One of my postgraduate students struggled to find a place to pump milk at the university – we don't currently provide good spaces for women to practice what we're asking them to do.

Reference: N Z Med J. 2017;130(1466):34-44
Abstract

New Zealand policy experts' appraisal of interventions to reduce smoking in young adults: a qualitative investigation

Authors: Ball J et al.

Summary: This qualitative investigation recruited 15 key informants including 5 politicians, 4 senior policy analysts and 7 leading tobacco control advocates. Five identified as Māori and 3 as Pacific; all had leadership roles in promoting, developing or implementing tobacco control policy. All informants took part in semi-structured interviews seeking their opinions on the feasibility and likely effectiveness of interventions designed to reduce smoking prevalence among 18–24-year-olds. The participants discussed 9 policy options, all of which could either promote greater mindfulness or introduce barriers impeding smoking uptake: smoke-free outdoor dining and bars; no tobacco sales where alcohol is sold; social marketing campaigns; real life stories (testimonials); life skills training; raise purchase age to 21; tobacco-free generation; smokers' licence; make tobacco retail premises R18. Thematic analysis of the interview transcripts revealed that the participants considered the more effective policies were those that denormalised tobacco; made it less convenient to access and use; highlighted immediate disadvantages (e.g. impact on fitness); aligned with young people's values; and addressed the underlying causes of smoking (e.g. stress). Participants highlighted some political barriers and some questioned whether raising the legal age of tobacco purchase to 21 might widen ethnic disparities in New Zealand, as underage access to tobacco is more prevalent in Māori and Pacific communities. Two interventions were viewed as both politically feasible and likely to lower smoking rates among young adults: social marketing campaigns and extending smoke-free regulations to include outdoor areas of cafes and bars.

Comment: As the authors suggest, ethnic disparities in smoking rates varies by age. Reviews of the effectiveness of tobacco control and smoking reduction policies have taken a 'whole of population' approach. Little has been done to understand how to reduce smoking in young adults, where it appears that Māori and Pacific people are at significant risk. The authors have provided excellent recommendations here, particularly the need to focus on 'what works' for Māori and Pacifica people who smoke, and how we support them to quit.

Reference: BMJ Open. 2017;7(12):e017837
Abstract

Dementia: Supplementary Findings from LiLACS NZ for Section Five, 'Service Use and Common Health Conditions' in the report 'Health, Independence and Caregiving in Advanced Age'

Funded by the Ministry of Health, the University of Auckland released the report *Dementia: Supplementary Findings from LiLACS NZ for Section Five, 'Service Use and Common Health Conditions'* in the report *'Health, Independence and Caregiving in Advanced Age'* on the 10th of May 2017. This report establishes how the presence of dementia affects older Māori and non-Māori (aged 80 years and above), and the services they use when the dementia patients also have cardiovascular disease, chronic lung disease and diabetes mellitus.

The study found that dementia was associated with lower functional status, higher frailty, poorer mental and physical health-related quality of life and higher health service use and cost. The combination of dementia with any of the physical health conditions studied in the report (cardiovascular disease, chronic lung disease, and diabetes mellitus) worsened health status and increased health service use and costs.

The project *Te Puāwaitanga O Ngā Tapuwae Kia Ora Tonu/ Life and Living in Advanced Age, a Cohort Study in New Zealand (LiLACS NZ)* is a longitudinal cohort study of New Zealanders in advanced age. LiLACS NZ is the world's first longitudinal study of an indigenous population aged 80 and over.

The report, along with the 13 previously released LiLACS NZ reports, can be found at the University of Auckland website:

https://www.fmhs.
auckland.ac.nz/en/
faculty/lilacs/research/
publications.html

'At-risk' individuals' responses to direct to consumer advertising of prescription drugs: a nationally representative cross-sectional study

Authors: Zadeh NK et al.

Summary: This study analysed a subset of pharmaceutical-related and health-related questions from a large online survey covering a range of attitudes, behaviour, consumption and lifestyle questions. All respondents (2057 community-living NZ adults) were deemed to be demographically representative of the general population as regard to age, sex, education, ethnicity and income. The study researchers explored the factors determining individuals' self-reported behavioural responses to direct to consumer advertising of prescription drugs (asking a physician for a prescription, asking a physician for more information about an illness, searching the internet for more information regarding an illness and asking a pharmacist for more information about a drug). In particular, the study examined whether 'at-risk' individuals (i.e. with poorer self-reported health status, older, less educated, lower income and ethnic minorities), may be more vulnerable to drug advertising and may make uninformed decisions accordingly. In multivariate logistic regression analyses, identifying as Indian and to a less extent Chinese, Māori and 'other' ethnicities were the strongest predictors of one or more self-reported responses (ORs 1.76–5.00; all p<0.05). Poorer self-reported health status (ORs 0.90–0.94; all p<0.05), favourable attitude towards drug advertising (ORs 1.34–1.61; all p<0.001) and searching for medical information online (ORs 1.32–2.35; all p<0.01) predicted all self-reported behavioural outcomes. Older age (ORs 1.01–1.02; all p<0.01), less education (OR 0.89; p<0.01), lower income (ORs 0.89–0.91; all p<0.05) and higher materialism (ORs 1.02–1.03; all p<0.01) also predicted one or more self-reported responses.

Comment: I've included this article here as I believe it provides unique and interesting results; and it was thought-provoking. Would we see a similar demographic profile for people who respond to blogs, or Facebook groups, or non-medical doctors providing 'health advice'? And what of the standards for these direct-to-consumer salespeople?

Reference: BMJ Open. 2017;7(12):e017865
Abstract

Association between short sleep duration and body mass index in Australian Indigenous children

Authors: Deacon-Crouch M et al.

Summary: These researchers obtained data from Wave 7 (conducted in 2014) of the Australian national Longitudinal Study of Indigenous Children survey for this investigation into whether poor sleep quality might contribute to health outcomes in Aboriginal children. The analysis specifically sought to determine whether an association exists between sleep duration and BMI. Short sleep was defined as <9 h for school-age children. Wave 7 of this survey included 1,253 children aged 7–12 years. Interviewers asked primary carers about children's sleep times. Regardless of age, relative socioeconomic disadvantage and level of remoteness, unhealthy weight (underweight, overweight, or obese) was associated with less sleep duration than healthy weight for Indigenous children.

Comment: We know short sleep is associated with poor health outcomes and obesity in all children and adults, regardless of ethnicity. The authors confirm this with Indigenous Australians, showing a similar effect size to that of the total population. However, as they also suggest, we should be asking about sleep quality in all young children, and have the information and resources available for parents. They found that sleep quality deteriorated when the number of adults in the home increased. In Aotearoa, racial discrimination appeared to play an important role in ethnic disparities in sleep disturbances. The development of strategies must take these points into consideration.

Reference: J Paediatr Child Health. 2018;54(1):49-54
Abstract

Impact of the National Cervical Screening Programme in New Zealand by age: analysis of cervical cancer trends 1985–2013 in all women and in Māori women

Authors: Smith MA et al.

Summary: These researchers obtained data from the New Zealand Cancer Registry for this analysis of cervical cancer trends by age and ethnicity between 1985 and 2013, and by morphology between 1997 and 2013. The overall incidence of cervical cancer was 56% lower in 2009–2013 than in 1985–1989, and significant reductions were observed in women aged 25–49, 50–69, and ≥70 years. Substantial, similar reductions in cervical cancer occurred among Māori and non-Māori women aged 25–49 (50% in Māori; 52% in non-Māori) and 50–69 years (65% in Māori; 69% in non-Māori), whereas cervical cancer incidence among women aged 20–24 years has appeared to increase after around 1996. This increasing trend was significant for women aged 20–24 overall and for non-Māori women (p<0.01 in both cases).

Comment: Some encouraging, and yet some worrying, results reported here. We must take advantage of opportunities to screen young women for cervical cancer, particularly when they may not present to the GP for themselves and are on long-term contraception (and not requiring the 6-monthly script).

Reference: Cancer Causes Control. 2017;28(12):1393-404
Abstract

Te Ohonga Ake: The Health Status of Māori Children and Young People in New Zealand Series Two was released on 23 June 2017.

The publication was funded by the Ministry and produced by the New Zealand Child Youth and Epidemiology Service (NZCYES) at the University of Otago. The sections that are presented in the publication include: issues in infancy, issues for ages 0-24 years, respiratory system conditions, communicable diseases, unintentional injuries, reproductive health and mental health.

The publication (along with previous reports in the Te Ohonga Ake series) can be accessed at:
https://ourarchive.otago.ac.nz/handle/10523/7390

TE OHONGA AKE

THE HEALTH STATUS OF MĀORI CHILDREN AND YOUNG PEOPLE
IN NEW ZEALAND
SERIES TWO
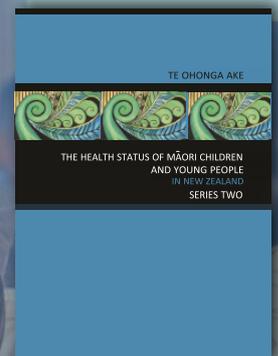
Widespread prevalence of a CREBRF variant amongst Māori and Pacific children is associated with weight and height in early childhood

Authors: Berry SD et al.

Summary: Recent research has reported that two variants within the *CREBRF* gene are present amongst Samoans and associated with an increased risk of obesity and a decreased risk of diabetes in adults. This study sought to determine whether these variants are prevalent in the many Pacific populations (including Māori and Pacific ethnic groups) in New Zealand and to establish whether they are associated with body growth and the development of obesity in early childhood. The study sample included 4,572 Māori, Pacific (including children identified as Samoan, Tongan, Cook Island Māori, Niuean, or Other Pacific Peoples), European, or Asian children from the 4-year data collection wave of the *Growing Up in New Zealand* study. DNA samples were collected from all participants and genotyped for two markers (rs12513649 and rs373863828). These genetic variants were not confined to Samoans but were prevalent in all other Pacific populations sampled, including Māori. The rs373863828 variant was significantly associated with weight, height and BMI at 4 years of age. In analyses adjusted for sex, age and population group, there was a substantial effect size for body weight attributed to the A allele at 4 years of age (455 g; s.e. 0158; p=0.004). For height at 4 years, the effect size attributed to the A allele was 0.70 cm (s.e. 0.26; p=0.007) and for waist circumference, the effect size attributed to the A allele was 0.64 cm (s.e. 0.24; p=0.004). The rs373863828 variant was not associated with birth weight (p=0.129).

Comment: See next paper.

Reference: Int J Obes (Lond). 2017 Sep 20. [Epub ahead of print]
Abstract

Worldwide trends in body-mass index, underweight, overweight, and obesity from 1975 to 2016: a pooled analysis of 2416 population-based measurement studies in 128.9 million children, adolescents, and adults

Authors: Abarca-Gómez L et al.

Summary: These researchers pooled data from 2,426 population-based studies presenting height and weight measurements of 128.9 million children aged ≥5 years, including 31.5 million aged 5–19 years. Bayesian analysis estimated trends in mean BMI among these children and adolescents from 1975 to 2016 in 200 countries, as well as prevalence of BMI from underweight to obesity: moderate and severe underweight was defined as >2 SD below the median of the WHO growth reference for children and adolescents; mild underweight was defined as 2 SD to >1 SD below the median; healthy weight was defined as 1 SD below the median to 1 SD above the median; overweight but not obese was defined as >1 SD to 2 SD above the median; obesity was defined as >2 SD above the median. From 1975 to 2016, mean BMI and obesity increased in children and adolescents in most countries. These rising trends have recently plateaued at high levels in many high-income countries, but have accelerated in parts of Asia.

Comment: I've paired these two papers to highlight the vast differences in thinking about, and therefore tackling, obesity. There is no doubt that being overweight and having obesity as a child and young person has long-term impacts and that the number of children who are obese is expected to outnumber those who are underweight in the next 10 years. I do worry that the 'gene is the problem' stance takes the focus from the structures, systems and environments that promote poor nutrition. As the authors of the *Lancet* article suggest: "*efforts in population-based prevention of overweight and obesity in children and adolescents should be matched with enhancing access to health-care interventions for weight management and for reducing the adverse effects of obesity*". In essence, our focus should be on the development of effective policy that delivers equitable outcomes in addition to the provision of quality care for those young people living with obesity, not on genes.

Reference: Lancet. 2017;390(10113):2627-42
Abstract

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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 Rangiura and Waimarie.

Inequity in timing of prenatal screening in New Zealand: Who are our most vulnerable?

Authors: Payne O et al.

Summary: This study sought to determine the relative contribution of demographic factors (ethnicity, deprivation, DHB of domicile and maternal age) with timing of prenatal screening, i.e. first versus second trimester) in pregnant women screened in New Zealand between 2010 and 2013. The majority (88%) of completed prenatal screens were completed in the first trimester. Ethnicity, age, deprivation and DHB were all significant predictors of completed first versus second trimester screening. In multivariate analyses, Māori women were almost 60% less likely (adjusted OR 0.37; 95% CI, 0.35 to 0.39) and Pacific women almost 80% less likely (adjusted OR 0.23; 95% CI, 0.21 to 0.24) than NZ European women to have completed first versus second trimester screening. Women aged <30 years and those living in more deprived areas were less likely to have completed first trimester screening. There was variation by DHB, with women living in Whanganui DHB less likely to have completed first versus second trimester screening than women living in Auckland (adjusted OR 0.76; 95% CI, 0.71 to 0.81). Women living in Bay of Plenty DHB were more likely to be screened in the first versus second trimester compared with women living in Auckland (adjusted OR 1.55; 95% CI, 1.38 to 1.74). In analyses adjusting for ethnicity, deprivation and maternal age, women living in Counties Manukau DHB were less likely to be screened in the first versus second trimester than women living in Auckland DHB.

Comment: It would be good to follow these results up with further quantitative analysis but also qualitative research with women who have not received best practice care. As the authors conclude, a number of factors are at play but each should be addressed. (I also had a couple of issues with the language used – women aren't deprived, they live in neighbourhoods of deprivation!)

Reference: Aust N Z J Obstet Gynaecol. 2017; 57(6):609-16
Abstract