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Making Education Easy

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In this issue:

Abbreviations used in this issue
ARF = acute rheumatic fever
CRHD = chronic rheumatic heart disease
MoH = Ministry of Health
RHD = rheumatic heart disease

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Tēnā koutou katoa

Nau mai, haere mai ki a Māori Health Review.
We aim to bring you top Māori and indigenous health research from Aotearoa and internationally.
Ngā mihi nui ki Manatu Hauora Māori for sponsoring this review, which comes to you every two months.
Ko te manu e kai i te miro nōna te ngahere, Ko te manu kai i te mātauranga, nōna te ao.

Ngā mihi
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Uneven progress in reducing exposure to violence at home for New Zealand adolescents 2001–2012: a nationally representative cross-sectional survey series

Authors: Gulliver P et al.

Summary: Using data from the New Zealand Youth 2000 series of cross-sectional surveys conducted with high school students in 2001, 2007 and 2012, these researchers explored changes in adolescent reports of witnessing violence at home between 2001 and 2012. The study also sought to determine what risk factors may explain differences in adolescent exposure to violence at home. Overall, throughout this period of time, there was no change in youth reports of witnessing of emotional violence at home and a slight decline was found in reports of witnessing physical violence at home. However, significant differences were noted between 2001 and 2007, and 2007 and 2012, in the proportion of adolescents who reported witnessing emotional and physical violence. Latent class analysis identified four latent classes in the study cohort, characterised by respondents' ethnicity, concerns about family relationships, food security and alcohol consumption. For two groups (characterised by food security, positive relationships and lower exposure to physical violence), there was a reduction in the proportion of respondents who witnessed physical violence but an increase in the proportion who witnessed emotional violence between 2001 and 2012. For the two groups characterised by poorer food security and higher exposure to physical violence, there were no changes in witnessing of physical violence in the home.

Comment: The 'It's Not OK' and similar anti-violence campaigns have been useful in terms of promoting an important message. However, as the researchers highlight here, addressing those wider determinants – poverty and the stress this creates, cold housing, discrimination – is just as important.

Reference: Aust N Z J Public Health. 2018;42(3):262-8
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 Rangiura and Waimarie.

Time spent reading this publication has been approved for CME for Royal New Zealand College of General Practitioners (RNZCGP) General Practice Educational Programme Stage 2 (GPEP2) and the Maintenance of Professional Standards (MOPS) purposes, provided that a Learning Reflection Form is completed. Please **CLICK HERE** to download your CPD MOPS Learning Reflection Form. One form per review read would be required.

Time spent reading this publication has been approved for CNE by The College of Nurses Aotearoa (NZ) for RNs and NPs. For more information on how to claim CNE hours please **CLICK HERE**

Holding a mirror to society? Progression towards achieving better sociodemographic representation among the University of Otago's health professional students

Authors: Crampton P et al.

Summary: This report updates an earlier article published in 2012 describing the sociodemographic profile of students enrolled with the University of Otago's Division of Health Sciences in 2010. In 2012, the University implemented a policy mechanism intended to ensure that all of its health professional programmes produce graduates that can appropriately meet the needs of the ethnic and socioeconomic realities in the communities that employ these people. This paper describes the sociodemographic characteristics of students accepted into eight health professional programmes at the University of Otago in 2016. Analysis of anonymised student data from the University of Otago's central student records system revealed marked increases between 2010 and 2016 in the proportion of Māori (124% increase) and Pacific students (121% increase) in health professional programmes, particularly in medicine and dentistry (increases of 179% and 133% respectively). In addition, the proportion of students from rural areas increased from 19.2% in 2010 to 22.5% in 2016 and the proportion of female students rose from 59.6% to 61.3%. There was little change in the overall socioeconomic profile.

Comment: See next paper.

Reference: N Z Med J. 2018;131(1476):59-69
Abstract

Implementation and impact of indigenous health curricula: a systematic review

Authors: Pitama SG et al.

Summary: This New Zealand-based research examined how effective cultural competency education is in improving health practitioner proficiency and addressing health inequities for minoritised patient groups. Their systematic review included 23 studies published up to December 2017 that involved undergraduate or postgraduate medical, nursing or allied health students or practitioners. All studies documented indigenous health learning outcomes, pedagogical practices and student evaluations. An interpretive synthesis informed by actor-network theory revealed three key themes in the data: (1) indigenous health as an emerging curriculum (drivers of institutional change, increasing indigenous capacity and leadership, and addressing deficit discourse); (2) institutional resource allocation to indigenous health curricula (placement within the core curriculum, time allocation, and resources constraining pedagogy); and (3) impact of the curriculum on learners (acceptability of the curriculum, learner knowledge, and learner behaviour). The study researchers conclude that systematic barriers acting on and within educational networks have not only limited the developmental capacity of indigenous health curricula, but also supported and sustained hidden curricula. Consequently, there is insufficient institutional investment to support a comprehensive curriculum. They call for investigations to explore these political and network intermediaries acting on cultural competence curricula in health professional education and to identify ways to overcome these barriers, in order to achieve cultural competency learning outcomes.

Comment: Two great papers looking at the ways we can develop a workforce that is responsive to Māori. Fantastic to see the increased numbers of Māori studying medicine and dentistry, and to see our leaders in indigenous medical education, publishing. As much as we need more Māori health workers, we also need a health workforce practicing in culturally safe ways. Support from universities and professional colleges is required for both.

Reference: Med Educ. 2018 Jun 22. [Epub ahead of print]
Abstract

Cost and affordability of diets modelled on current eating patterns and on dietary guidelines, for New Zealand total population, Māori and Pacific households

Authors: Mackay S et al.

Summary: These researchers calculated the affordability of diets modelled on current (less healthy) eating patterns and on dietary guidelines of a healthy diet for the total population of New Zealand, Māori and Pacific households. Diets using common foods were developed for a household of four for each population group. The appropriateness of these diets was guided by nutrition expert panels. Each current (less healthy) diet was based on eating patterns identified from national nutrition surveys. Food prices were collected from retail outlets. Only the current diets contained alcohol, takeaways and discretionary foods. The modelled healthy diet was cheaper than the current diet for the total population (3.5% difference) and Pacific households (4.5% difference) and similar in cost for Māori households (0.57% difference). When the diets were equivalent in energy, the cost of the healthy diet exceeded that of the current diet for all population groups (by 8.5% for the total population, 13.3% for Māori, and 15.6% for Pacific households). For households on the minimum wage ($1,115/week), the diets required 33.9% of household income for the total population, 28.3% of household income for Māori, and 27.8% of household income for Pacifica; if receiving income support ($636/week), the diets required 52.8%, 44.2% and 43.3% of household income, respectively. After removing the 15% Goods and Services Tax (GST) from core foods, the healthy diet became more affordable than the current diet. Expert panels were invaluable in guiding the process for specific populations. Interestingly, both the healthy and current diets cost less in the urban area than in the rural area; the healthy diet cost 9.4% more and the current diet 7.6% more in rural areas.

Comment: Here we have good evidence on the costs and affordability of kai for Māori whanau. The evidence that healthy diets required more income, and were less affordable for those receiving income support, should come as no surprise to most of us. However, this paper will be a useful resource to back an appropriate response.

Reference: Int J Environ Res Public Health. 2018;15(6)pii:E1255
Abstract

Using preceding hospital admissions to identify children at risk of developing acute rheumatic fever

Authors: Oliver J et al.

Summary: This analysis of NZ public hospital discharge data from 2000 through 2014 examined the effectiveness of using hospitalisations to identify children at subsequent risk of acute rheumatic fever (ARF). The national ARF prevention programme has introduced funding to improve housing. As the study researchers explain, effective tools are needed for targeting high-risk children at risk of ARF, so that all interventions yield the greatest benefit. Three potentially avoidable hospitalisation (PAH) groups were investigated, including diseases thought to be influenced by housing: (i) PAH conditions associated with the housing environment (PAHHE) group; (ii) the Crowding group; and (iii) the Ministry of Health (MoH) group. Nearly one-third of ARF cases had previously experienced a PAH as children. Sensitivity for detecting future ARF ranged from <5% (MoH group) to 27% (PAHHE group). The number needed to screen to identify one ARF case ranged from 502.4 with the PAHHE group to 707.5 with the MoH group.

Comment: See next paper.

Reference: J Paediatr Child Health. 2018;54(5):499-505
Abstract

Scabies is strongly associated with acute rheumatic fever in a cohort study of Auckland children

Authors: Thornley S et al.

Summary: This analysis of data from the Auckland Regional Dental Service (ARDS) involved 213,957 children aged 3–12 years attending the ARDS for the first time who were free of rheumatic heart disease at baseline. Over a mean 5.1 years of follow-up, there were 440 hospital diagnoses of ARF or chronic rheumatic heart disease (CRHD). Children diagnosed with scabies during follow-up were 23 times more likely to develop ARF or CRHD, compared with children who had no scabies diagnosis. This association persisted in a Cox regression analysis adjusting for potential confounders (adjusted HR 8.98; 95% CI, 6.33 to 20.2). When the analysis was restricted to children hospitalised at least once during follow-up, the adjusted hazard ratio for the same comparison was 3.43 (95% CI, 1.85 to 6.37).

Comment: Two important papers here looking at rheumatic fever in Aotearoa. Even though it is not common, the significant disparities in rheumatic fever and heart disease rates between Māori and Pacific people and non-Maori/Pacific are appalling, and reflect badly on NZ's approach to the wellbeing of Māori and Pacific children. Both papers offer potential solutions: a housing review for children presenting to hospital; and diagnosing/treating scabies.

Reference: J Paediatr Child Health. 2018;54(6):625-32
Abstract

Socioeconomic and tobacco mediation of ethnic inequalities in mortality over time: Repeated census-mortality cohort studies, 1981 to 2011

Authors: Blakely T et al.

Summary: Using census-mortality data from the NZ 1981–1984 (1.1 million 25- to 74-year-olds), 1996–1999 (1.5 million) and 2006–2011 (1.5 million) censuses, this study considered three research questions:

(1) How much of the ethnic inequality in mortality in NZ (between Māori and Europeans) is mediated by socioeconomic factors (income, education, neighbourhood deprivation, and labour force status), and does this change over time?

(2) What is the incremental increase in mediation when including smoking over and above socioeconomic position, and does this change over time?

(3) What inequalities would exist if NZ had been tobacco-free between 1981 and 2011?

In all three cohorts, socioeconomic factors explained 46% of male inequalities and increased over time among females from 30.4% in 1981–1984 to 41.9% in 2006–2011. The addition of smoking to socioeconomic factors modestly increased the percentage mediated in 1981–1984 from 0.8% to 2.0% in 2006–2011 for males, whereas among females, the addition of smoking made a more substantial contribution to mediation of 3.0% points in 1981–1984 to 7.7% in 2006–2011. If nobody had smoked tobacco (but otherwise had identical socioeconomic position), ethnic mortality inequalities would have been 12.2% less for males and 21.2% for females in 2006–2011.

Comment: An interesting study highlighting the huge contribution of socioeconomic factors to health inequities. Further, the increasing impact that social inequality has on women's health over time is important. As the authors suggest, reducing socioeconomic disparities will have the biggest impact to achieving health equity in Aotearoa.

Reference: Epidemiology. 2018;29(4):506-16
Abstract

Postoperative death after lower-limb amputation in a national prevalent cohort of patients with diabetes

Authors: Gurney JK et al.

Summary: In this study, a national prevalent cohort of 302,339 NZ patients with diabetes diagnosed between 2005 and 2014 was followed until the end of 2014 for major and minor lower-limb amputation and subsequent postoperative mortality. The analysis included 6,352 lower-limb amputations (2,570 major amputations, 3,782 minor amputations). Among the patients who underwent a major amputation, 11.1% died within 30 days and 17.6% died within 90 days. Māori and patients aged >75 years were consistently more likely to die in the postoperative period. Cox proportional hazards analysis failed to demonstrate that sex, deprivation, rurality, hospital volume, admission type, and patient comorbidity were consistently or substantially independently associated with risk of postoperative mortality.

Comment: 18% mortality at 90 days post-op is high, and a reminder that we should be doing all we can to prevent amputation for our patients with diabetes.

Reference: Diabetes Care. 2018;41(6):1204-11
Abstract

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Inequalities in dental caries experience among 4-year-old New Zealand children

Authors: Shackleton N et al.

Summary: Using cross-sectional near whole population-level data on 318,321 four-year-olds attending NZ's national health and development "B4 School check", these researchers investigated ethnic-specific deprivation gradients in early childhood dental caries experience across 6 fiscal years (2010/2011 to 2015/2016). Deprivation gradients were assessed with the Index of Multiple Deprivation, which measures 7 domains of deprivation across 5,958 geographical areas ("data zones"). Ethnicity was categorised as Māori, Pacific, Asian, Middle Eastern, Latin American and African, or European & Other (combined). The "lift the lip" screening tool was used to estimate experience of any caries and severe caries. Reports of any caries experience fell from 15.8% in 2010/2011 to 14.7% in 2015/2016; reports of severe caries experience increased from 3.0% to 4.4% from 2010/2011 to 2015/2016. This varied by ethnicity; Pacific children had larger increases in severe caries – from 7.1% to 14.1%. A random intercepts model estimating mutually adjusted associations between deprivation, ethnicity, age, fiscal year, and evidence of any dental caries experience revealed deprivation gradients in dental caries experience with considerable variation by ethnicity and by domain of deprivation. The association between deprivation and dental caries experience was weakest for Asian children and was most pronounced for Pacific and Māori children.

Comment: An important reminder that Oranga Nīho is a significant health issue. Although this paper looked at issues in children, poor dental health in Māori adults is of equal concern. We've a fantastic resource in our clinic, developed by a social worker for GPs and nurses to utilise with patients, assisting them to access affordable dental care, including payments within their means (particularly for those on benefits). The difference to people's lives when they have good oral and dental health has been amazing. For example, people who were once too shy to leave their home are now more socially engaged. I'd encourage others to do the same.

Reference: Community Dent Oral Epidemiol. 2018;46(3):288-96
Abstract

Screening for mental health needs of New Zealand youth in secure care facilities using the MAYSI-2

Authors: McArdle S et al.

Summary: These researchers sought to determine the prevalence of probable mental health disorder and related needs among young people in secure facilities in NZ. The analysis used Massachusetts youth screening instrument – second version (MAYSI-2) data obtained from the records of 204 young people admitted to a single secure care facility over a 12-month period. Nearly 80% of the cohort scored above the 'caution' or 'warning' cut-off point for the MAYSI-2 score, which was a substantially higher proportion than what has been reported by studies from other countries. Girls, Māori and Pacific Islanders tended to have a higher rate of probable psychopathology.

Comment: Further evidence on the overlapping issues for those in secure facilities – mental health needs that aren't being met, often alcohol and drug dependence that isn't treated, an increased likelihood of having an undiagnosed traumatic brain injury, and a justice system that has failed to identify, let alone address, these. I hope the plan to have 'rehabilitation programmes' in prison will start with better screening.

Reference: Crim Behav Ment Health. 2018;28(3):239-54
Abstract