Pacific Health Review

Making Education Easy

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In this issue:

Kia orana, Fakalofa lahi atu, Talofa lava, Malo e lelei, Bula vinaka, Taloha ni, Kia ora, Greetings.

Our thoughts and sympathies are with the people of Christchurch this week as they begin the massive task of recovery and rebuilding their lives and their great city. The events of this week are a stark reminder of the significance of environmental factors in determining health and well being.

Many of the studies covered in this edition highlight the additional burden of socio-economic conditions, which for less well-off populations compound environmental factors. These studies again emphasise the impact of poverty as a fundamental barrier access to healthcare.

It is timely to consider the importance of research that focuses on the most vulnerable in our communities. At all levels of the health system – organisations and individual health professionals – we must maintain a focus on how we can reduce inequalities in health outcomes, thereby improving the health status of all New Zealanders.

We would like to express our condolences to those people in Christchurch who have suffered bereavements or injuries within their family and community.

Best wishes

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Dr Debbie Ryan, Principal Pacific Perspectives, selected the articles and coordinated the commentaries for this edition.
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The role of sociocultural factors in obesity aetiology in Pacific adolescents and their parents: a mixed-methods study in Auckland, New Zealand

Authors: Teevale T et al

Summary: This paper presents an analysis of data from a self-completion questionnaire administered to 2495 Pacific students who participated in the New Zealand arm of the Obesity Prevention In Communities (OPIC) project, with quantitative comparisons between 782 obese and 814 healthy weight students. Sixty-eight people (33 adolescents and 35 parents) from 30 Pacific households were interviewed in a qualitative phase of the study. The study aimed to clarify sociocultural factors that may promote or prevent obesity in Pacific communities in New Zealand.

Comment: (Dr Karlo Mila-Schaaf) This research project provides us with important new evidence about obesity aetiology in our Pacific communities. It is useful to know that parental presence at home was associated with children being of a healthy weight and that shift-type working arrangements were more likely to be associated with obese adolescents. Skipping breakfast and missing school lunches were also associated with obesity among young Pacific adolescents. The research team concluded that socio-economic circumstances determined food and physical activity behaviours more than cultural beliefs or values. While there is a relatively high level of awareness about what is healthy, it is clear that socio-economic constrictions play a defining role in influencing actual behaviour in our Pacific communities.

While the family setting was identified as a key environment, ultimately interventions at a structural level addressing affordability were recommended, such as removing GST (Goods and Services Tax) from healthy foods. There are certainly no quick fixes and interventions at a structural level require great political will. However, this large-scale and robust piece of research provides clarity that socio-economic disadvantage is one of the most serious challenges facing the Pacific community when it comes to tackling obesity and improving healthy lifestyles.

Reference: N Z Med J. 2010;123(1326):26-36.

http://www.nzma.org.nz/journal/abstract.php?id=4441

Body image and body change strategies among Tongan adolescents in Tonga and New Zealand

Authors: McCabe MP et al

Summary: This paper reports the body image and body change strategies of Tongan adolescents, using material from 598 Tongans from Tonga and 388 Tongans from New Zealand who completed measures of body image, body change strategies and messages about their body.

Comment: (Dr Karlo Mila-Schaaf) This is a particularly interesting study, which provides statistical comparisons between Tongan adolescents in Tonga and Tongan adolescents in New Zealand. As there are very few comparative studies between the two populations, this research is especially appealing. Robust evidence is particularly welcome when assumptions are readily made about the differences between Tongan children raised in the homelands and those raised in New Zealand. The study shows that a higher proportion of NZ-based Tongans were overweight or obese (above 60%) compared to adolescents living in Tonga (49%). Of particular interest were the different gender patterns. In Tonga, females were twice as likely to be obese or overweight compared with males. However, in New Zealand this gender difference was not evident, with males and females similarly likely to be overweight or obese.

The study also showed that Tongans in Tonga were more likely to be engaged in strategies to adjust their weight (lose weight, gain weight or increase muscle). When compared with NZ-based Tongans, they were more likely to be adopting strategies to lose weight, even though they were also more likely to receive messages that a large body type was desirable. The findings point to rich cultural complexities and paradoxes, although a deep understanding of these is not evident in the paper. The research does, however, provide a range of very useful starting points for further qualitative inquiry.

Reference: N Z Med J. 2010;123(1326):37-46.

http://www.nzma.org.nz/journal/abstract.php?id=4447

Overweight among New Zealand adolescents: associations with ethnicity and deprivation

Authors: Utter J et al

Summary: This study describes the prevalence of overweight/obesity among New Zealand adolescents and the demographic characteristics, including neighbourhood deprivation, associated with overweight/obesity.

Comment: (Dr Siniva Sinclair) Another fascinating output from Youth'07, the second national survey of New Zealand secondary school students (the first was in 2001), which included over 9000 adolescents aged 15–19, of whom 13% identified as Pacific. This showed high rates of obesity and overweight among NZ adolescents, comparable with those in the United States. Body size – measured by both body mass index (BMI) and waist circumference – did not vary greatly by gender or age, but was significantly different by ethnicity and area-level deprivation. Pacific students had the highest rates of obesity (27%) followed by Māori (16%). Nearly 50% of students living in high-deprivation areas were overweight or obese, compared with 26% of those in the low-deprivation areas. For Pacific, Māori and European students (but not Asians or students of other ethnicities), mean BMIs and also mean waist circumferences increased from low- to high-deprivation areas, with Pacific students showing the greatest increase (mean BMI 24.08 for those living in low-deprivation areas and 26.45 for those in high-deprivation areas, with corresponding mean waist circumferences of 76.49cm in low- and 82.49cm in high-deprivation areas). The authors conclude: "Strategies that address the inequalities in socioeconomic deprivation for New Zealand's young people are warranted for obesity prevention and would potentially have the greatest impact for Pacific Island and Māori populations." Priority should also be given to tailoring effective interventions to those segments of the population most affected by youth obesity, even earlier in the life course, i.e., in childhood.

Reference: Int J Pediatr Obes. 2010;5(6):461-6.

http://informahealthcare.com/doi/abs/10.3109/17477160903568439

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Api Talemaitoga, Clinical Director, Pacific Programme Implementation, wishes to acknowledge the commentaries and insights provided by Dr Siniva Sinclair, Ms Debbie Sorensen, Dr Karlo Mila-Schaaf, Dr David Schaaf, Dr Tule Fanakava Misa, Marisa Maepu, Dr Andrew Chan Mow and Dr Colin Tukuitonga.

Recruiting and retaining primary care physicians in urban underserved communities: the importance of having a mission to serve

Authors: Odom WK et al

Summary: These researchers conducted in-depth interviews with 42 primary care physicians from Los Angeles County, California, stratified by race/ethnicity (African American, Latino, and non-Latino White) and practice location (underserved vs non-underserved area).

Comment: (Ms Debbie Sorensen) New Zealand faces similar challenges in recruiting and retaining clinical staff in underserved areas. The paper identifies that physicians chose to work in underserved areas due to personal motivators such as intrinsic influences from their background and personal values. They were also influenced by career motivators such as logistical, personal and family influences and also by clinic support factors such as models of care. Personal motivators that most attracted participants to underserved areas included personal growth factors, self-identity i.e. "my patients remind me of my cousins…" and mission-based values such as "you have to find people dedicated to serve this community".

These factors are all present in Pacific doctors practicing in a New Zealand context. The cultural and so-called self-identity factors are often strongly felt, as are the mission-based factors and the strong "service value and ethic" present in many Pacific cultures. Work hours and lifestyle were also important factors as was geographical location to self-identified community.

Most physicians who worked in underserved areas, regardless of ethnicity, reported a unique feeling of "connectedness" to that community. The most interesting finding from this study is that none of the physicians who were trained outside of an underserved community went to work in an underserved community. The New Zealand health sector could benefit from considering the conclusions from this paper: an enlightened recruitment strategy that develops a corps of motivated, mission-driven, and committed primary care physicians who identify with and feel connected to underserved communities . . . will meet the challenges of disparities in care among the underserved. The Pacific Provider Workforce Development Fund has developed a number of programmes that have begun to work towards this goal, including the recruitment of Pacific physicians and nurses into primary care, the Pacific Health Alumni programme to develop Pacific leadership and the Pasifika Medical Association programmes, to encourage young Pacific people from underserved areas into health careers.

Reference: Am J Public Health. 2010;100(11):2168-75.

http://ajph.aphapublications.org/cgi/content/abstract/100/11/2168

Snacking habits and caries in young children

Authors: Johansson I et al

Summary: This study examined the association between snacking and caries in a cohort of 1206 American preschool children (61% Black, 27% White and 10% Asian).

Comment: (Dr Tule Fanakava Misa) This study showed that 6% of 1- to 2-year-old children, 18% among the 2- to 3-year-olds and 33% among the 3- to 4-year-olds had dental caries. Dental caries were higher among preschoolers who ate sweet snacks most days including chips and sugar containing drinks than those who consumed fresh fruit, crackers and yoghurt. Babies who continued to be breastfed after falling asleep had more caries. The presence of plaque was one of the predisposing factors strongly associated with dental caries together with eating sweet snacks such as candies, ice-cream and others. Although dental caries were observed in all levels of socio-economic status, this study found that the prevalence of dental caries was higher among the low socioeconomic status. Dental caries were also higher among children with sweet snacking habits. Children between the ages of 1 to 4 who participated in the study would be in total dependence on their parents and caregivers for what they eat and daily activities. Evidently, educating parents and caregivers on oral hygiene such as tooth brushing to remove plaque from teeth is of paramount importance. Oral health education should also include the type of snacks to be given to children and how the frequency of consuming sugar-contained snacks harm children's teeth. This study is applicable to our Pacific population in New Zealand as we are among the highest in the prevalence of dental decay in this age group. (In New Zealand, one in four of the Pacific children in the age group of 2–4 had an untreated tooth decay in one or more primary teeth (Our Oral health, 2010)).

Reference: Caries Res. 2010;44(5):421-30.

http://content.karger.com/produktedb/produkte.asp?doi=318569

Early feeding practices and severe early childhood caries in four-year-old children from southern Brazil: a birth cohort study

Authors: Feldens CA et al

Summary: This birth cohort study assessed early feeding practices that represent risk factors for caries severity in subsequent years among 500 children who were born within the public health system in São Leopoldo, Brazil. Severe early childhood caries (S-ECC) was defined as: ≥1 cavitated, missing or filled smooth surfaces in primary maxillary anterior teeth or d_{1+} mfs ≥5.

Comment: (Dr Tule Fanakava Misa) This study shows that there are feeding practices during the first year of the baby's life that are strongly linked to S-ECC at 4 years of age. These feeding practices are; high frequency of daily breastfeeding, high frequency of sugar intake, bottle fed with liquids other than milk and the frequency of meals and snacks taken a day. Although breastfeeding is very much encouraged in all health dynamics, this study shows that for babies who are breastfed more than seven times daily in their first 12 months are more prone to S-ECC. Breastfeeding the child for comfort to a stage of leaving the breast in the child's mouth till sleeping can be very harmful to their teeth. In the first 12 months of life, babies are totally dependent on their mothers 'care. Therefore, educating mothers on feeding practices that may lead to S-ECC is very crucial especially for those in low socio-economic status and the less educated. Severe early childhood caries (S-ECC) affects the quality of life in young children and their families. S-ECC often needs dental professionals to intervene, relief pain and restore normal life. Dental treatments of young children with S-ECC are often complicated and costly. Preventing S-ECC by educating mothers on feeding practices that may be harmful to their children's teeth may be one step to counteracting S-ECC. However, further research may be commissioned to assess the effectiveness of oral health education and feeding practices among mothers. This study is applicable to our Pacific population; as we are among those with a high prevalence of dental decay in young children.

Reference: Caries Res. 2010;44(5):445-52.

http://content.karger.com/ProdukteDB/produkte.asp?Aktion=ShowAbstract&ArtikelNr=319898&Ausgabe=254528&ProduktNr=224219

Meta-synthesis of health behavior change meta-analyses

Authors: Johnson BT et al

Summary: This US-based meta-synthesis provides information about the efficacy of behavioural change interventions across health domains and populations.

Comment: (Dr David Schaaf and Dr Karlo Mila-Schaaf) A meta-analysis provides an opportunity to show the bigger statistical picture that is possible when combining and analysing results across several studies that have similar aims and hypotheses. This article examines the findings of 62 meta-analyses, combining a total of 1011 primary level investigations, and more than half a million participants.

The research found that most health behaviour change interventions (89%) confirmed statistically significant health promotion effects. While they concluded that interventions did improve health-related behaviours, they did detect wide variability with some interventions being very effective and others less so (effect size ranging from 0.08–0.45). The biggest effect size was found in stress management interventions (0.45), followed by improving participation in health services (0.35), then eating and physical activity interventions (0.22), addictions (0.21), screening and treatment behaviours for women (0.21) and finally sexual behaviours (0.08).

The good news is that the meta-synthesis usefully puts a stake in the ground, providing empirical evidence that health behaviour change interventions are of value, they do improve health and that they are worthy of support and investment when tackling diseases and health burden. The less celebratory aspects are the relatively small to medium effect sizes and the heavy reliance on self-reported data. That said, when interventions are applied to a population, even a small effect size can have a relatively large public health impact. Particularly encouraging was the discovery that efficacy was higher in more recently generated meta-analyses, most likely because interventions have become more refined, sophisticated and well-developed over time, building on previous intervention knowledge.

Reference: Am J Public Health. 2010;100(11):2193-8.

http://ajph.aphapublications.org/cgi/content/abstract/100/11/2193

What are the determinants of food insecurity in New Zealand and does this differ for males and females?

Authors: Carter KN et al

Summary: These researchers investigated the demographic and socio-economic determinants of food insecurity in New Zealand and whether these determinants vary between males and females. Using data from the longitudinal Survey of Families, Income and Employment (SoFIE) (n=18,950), respondents were classified as food insecure if, in the past 12 months, they had to use special food grants or food banks, been forced to buy cheaper food to pay for other things, or had to go without fresh fruit and vegetables often.

Comment: (Marisa Maepu) A main strength of the analysis is that the authors use data from a large population-based sample representative of New Zealand, namely, SoFIE. Included in the study's findings were that more than 15% of the SoFIE population was food insecure in 2004/05, food insecurity was much greater in females (19%) than males (12%), and was higher among Māori and Pacific people.

As the study indicates, the issue of food insecurity is particularly pertinent for Pacific people, who are disproportionately burdened by nutrition-related diseases, such as diabetes and obesity, and poorer socio-economic outcomes. Traditionally, food has had an important socio-cultural role in Pacific communities and cultures, and this has remained the case for many Pacific peoples in New Zealand today.

Encouragingly, the authors intend to undertake more detailed investigations looking at the causal pathways leading to food insecurity. From a Pacific policy perspective, this study and future ones lend further support to the importance of improving the socio-economic determinants of health for Pacific people, particularly income, employment and education.

Reference: Aust N Z J Public Health. 2010;34(6):602-8.

http://tinyurl.com/6y6t7y2

The determinants of GP visits in New Zealand

Authors: Cumming J et al

Summary: These researchers compared data from the 1996/97 and 2002/03 waves of the New Zealand Health Survey to examine the relationship between individual, household and community characteristics and the utilisation of healthcare services by New Zealanders. In adjusted multivariate regression analyses, gender, age and ethnicity were significantly related to primary healthcare utilisation. A strong relationship was observed between employment status, health status and healthcare utilisation.

Comment: (Dr Colin Tukuitonga) This is an interesting study and the findings are at odds with the established literature. The National Health Committee Report 'Improving Health for New Zealanders by Investing in Primary Health Care' (2000) clearly showed that significant barriers limited access to primary care services in New Zealand, especially for groups with low socioeconomic status. Several other studies have shown that availability of primary health care services is highly variable in NZ and poorer areas were more likely to have fewer health professionals per capita. The distribution of primary health practitioners and fee-for-service funding arrangements prevalent at the time helped explained differential access to primary health services by socioeconomic status.

This study was a 'before and after' comparison using data from the 1996/97 and the 2002/03 NZ Health Surveys. The NZ Primary Health Care strategy was introduced in 2001, which included major changes to the way primary care is organised and funded in NZ.

Study findings are more likely to reflect methodological problems and further studies are needed.

Reference: Aust N Z J Public Health. 2010;34(5):451-7.

http://tinyurl.com/4kpyjsj

A systematic approach to diabetes mellitus care in underserved populations: improving care of minority and homeless persons

Authors: Baty PJ et al

Summary: This US-based study sought to determine whether a comprehensive structured systems-based disease management process including a diabetes registry that had been successful in a suburban, commercial, and mainly insured patient population could improve diabetes process outcomes when applied to Community Health Centers serving minority and at-risk populations. Implementing standardised processes that support best practices and high-quality care significantly improved clinical outcomes but did not eliminate disparities in diabetes outcome measurements (including percentage of patients with HbA_{1C} <7%, HbA_{1C} >9%, LDL <130, LDL <100, and percentage of patients with retinopathy screen or microalbumin test within the past year), with the Community Health Centers lagging behind in all comparisons.

Comment: (Dr Andrew Chan Mow) Though there is nothing new here that has not already been published, the study does provide further evidence that a standardised system that provides support for clinical practice and healthcare produces good quality clinical data but does not necessarily lead to better outcomes for high-risk ethnic groups. Chronic care management relies on the collection of high quality clinical data, which has been done here but more importantly, in the development of strategies that specifically address issues related to reducing barriers to healthcare access, cost, health literacy, socio-economic factors that contribute to unhealthy living conditions and unhealthy lifestyles. The article indeed states "Other barriers to care that were identified . . . included inability to obtain prescribed medications and lack of funds for out of pocket health care costs."

The study does indeed mirror the experience here in New Zealand, in that diabetes screening and diagnosis rates has improved for Pacific peoples but the rates of complications and health outcomes remain poor. The implementation of a standardised systems approach is a good starting point to addressing disparities but it remains only that, a good starting point.

Reference: Fam Med. 2010;42(9):623-7.

http://www.stfm.org/fmhub/fm2010/October/Philip623.pdf