

Pacific Health Review

Making Education Easy

Issue 9 – 2010

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

Welcome to the ninth edition of Pacific Health Review. This edition sets a new direction for this publication with emerging and prominent Pacific clinicians and researchers providing commentary on national and international research publications about health issues impacting on the health of Pacific peoples. The articles address patient and system issues for minority populations in New Zealand and overseas, including screening programmes for cervical, breast and bowel cancers; diagnosis and treatment in primary and secondary care; and how research design and evaluation tools need to be adjusted for Pacific and minority populations.

The economic evaluation of PHC interventions for indigenous Australians provides a challenge for New Zealand's policy makers. It supports an equity approach to balancing the efficiency agenda, with a focus on the processes of providing equitable health care requirements for economic analysis to focus on costs and inputs, not just the outcomes side of the equation.

Special thanks to our commentators for this issue: Dr Corina Grey, Dr Faafetai Sopoaga, Dr Fionna Bell and Dr Sunia Foliaki. Vinaka vaka levu to Dr Colin Tukuitonga, who has provided the commentaries for Pacific Health Review for the past three years.

We welcome your feedback.

Dr Api Talemaitoga, Clinical Director Pacific Programme Implementation

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Diagnostic and therapeutic delays among a multiethnic sample of breast and cervical cancer survivors

Authors: Ashing-Giwa KT, et al

Summary: This article was based on research done in the United States involving women from different ethnic backgrounds between 2000 and 2004. It explored the reasons for therapeutic and treatment delays for breast and cervical cancer patient survivors. Some areas of interest are:

- Breast cancer – most (51%) were diagnosed from breast self-examination
Cervical Cancer – most (59%) were diagnosed from routine cervical screening
- There are disparities within ethnic minorities. Of the three minority ethnic groups, Latina women were more likely to have financial difficulties and a fear of cancer diagnosis causing delays in access to healthcare.
- Limited resources can influence the ability to have consistency when working with different ethnic groups. For example, the questionnaire was translated for some ethnic groups and not others.

Comment: (Dr Faafetai Sopoaga) This research found that most women with breast cancer discovered the problem themselves. Pacific women should be encouraged to see their doctor if they discover a breast lump. Most women were diagnosed with cervical cancer through routine examination. Cervical screening can also pick up pre-cancerous stages. Routine cervical smear screening can prevent the development of cervical cancer. The Pacific community in New Zealand is heterogenous. It is possible there are differences between different ethnic groups with respect to access to health care services, early diagnosis and treatment of cancers. This may be an area of interest to explore for researchers within New Zealand.

Reference: *Cancer*. 2010;116(13):3195-204.

<http://onlinelibrary.wiley.com/doi/10.1002/cncr.25060/abstract>



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Socio-economic inequalities in breast and cervical cancer screening practices in Europe: influence of the type of screening programme

Authors: Palència L, et al

Summary: This article was based on a study involving women from 22 European countries in 2002. It looked at describing factors that influenced use of breast and cervical screening services. The delivery of services ranged from a population-based cancer screening programme in some countries, to opportunistic screening in others. The research found inequalities in the use of screening services to be higher in countries that do not have a population-based approach.

Comment: (Dr Faafetai Sopoaga) New Zealand has a population-based approach to breast and cervical cancer screening. The combination of a population-based approach, the cooperation of physicians and Pacific community health promotion activities can encourage uptake of these services by Pacific women living in New Zealand.

Reference: *Int J Epidemiol.* 2010;39(3):757-65.

<http://ije.oxfordjournals.org/content/39/3/757.abstract>

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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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Australia's National Bowel Cancer Screening Program: does it work for Indigenous Australians?

Authors: Christou A et al

Summary: This paper sought to identify which aspects of Australia's National Bowel Cancer Screening Program (NBCSP) may contribute to the discrepancy in screening uptake, with Indigenous Australians significantly less likely to participate in screening than the non-Indigenous population. The paper suggests that factors contributing to suboptimal participation among Indigenous Australians in the target group include how participants are selected, the way the screening kit is distributed, the nature of the test and comprehensiveness of its contents, cultural perceptions of cancer and prevailing low levels of knowledge and awareness of bowel cancer and the importance of screening.

Comment: (Dr Sunia Foliaki) Cancer is a leading cause of mortality and morbidity among Pacific populations in New Zealand as well as in respective Pacific countries. The evaluation from the NBCSP illustrates similar if not identical community and individual level challenges encountered in priority health screening/intervention programs for Pacific populations. In particular, certain leading causes of cancer mortality and morbidity among Pacific people, such as bowel and cervical cancer have long latency periods with ample opportunities for periodic detection and management at treatable stages. In addition, in the absence of regular screening the majority of these leading conditions manifest symptoms to the individuals when it is too late. The reasons for the lack of active participation in screening are obviously multilayered and strategies to counter them should be in concert with such interventions ranging from policy, organisations' data availability and research to complement known causes to individual approaches. Various reviews have been conducted among ethnic minorities elsewhere to enlighten strategies. Health providers and in particular, Pacific Island health providers and stakeholders, have a vital role from ensuring conditions are conducive to policy and individual level interventions as well as encouraging further qualitative and quantitative research to address low participation in priority health screening. One message that should over-ride community education, though, is that you don't go to bed cancer-free and wake up the next morning with full-blown cancer. It's a process, often with the leading cancers like cervical cancer having long latency periods with opportunities to detect early changes that are treatable. Hence the beauty of screening.

Reference: *BMC Public Health.* 2010;10:373.

<http://www.biomedcentral.com/1471-2458/10/373>

Causes of excess hospitalisations among Pacific peoples in New Zealand: implications for primary care

Authors: Sopoaga F et al

Summary: Specific causes of excess morbidity in the Pacific population were assessed by examining public hospital discharge data from July 2000 to December 2002 and population data from the 2001 Census. Pacific peoples were 6 times more likely to have a diagnosis of cardiomyopathy and gout, and 4 to 5 times of rheumatic fever, gastric ulcer, systemic lupus erythematosus (SLE), and diabetes. Respiratory diseases, skin abscesses, heart failure, cataracts, cerebral infarction and chronic renal failure were also significant causes of excess morbidity. Unexpected causes of excess morbidity included candidiasis, excess vomiting in pregnancy (hyperemesis gravidarum) and pterygium.

Comment: (Dr Fionna Bell) This analysis of public hospital discharge data demonstrates that people of Pacific ethnicities are hospitalised with avoidable conditions of morbidity more frequently than the total NZ population.

The excess cardiomyopathy hospitalisations are consistent with excess rates of rheumatic fever, bronchiectasis, morbid obesity, cardiovascular disease, and SLE in Pacific people. These conditions could be prevented or improved by providing people of Pacific ethnicities quality interdisciplinary healthcare for the earlier and effective management of streptococcal throat and skin infections, pneumonia, obesity and other cardiovascular disease risk factors. SLE is the least preventable precursor of cardiomyopathy currently, but as a long-term autoimmune disease, is manageable.

The excess of gastric ulcer hospitalisations is consistent with the higher known prevalence of *Helicobacter pylori* and excess hospitalisations for gout. Poorly controlled gout is often self-managed with over-the-counter and relatives' prescribed non-steroidal anti-inflammatory drugs (NSAIDs). Excess NSAIDs can induce gastric ulcers as well as contribute to renal impairment. As healthcare practitioners, we need to change the perception of gout to that of a long-term condition that can be managed with structured care, and fewer NSAIDs, by offering evidence-based gout management.

Pterygia are avoidable with the habitual use of sunglasses. Sunglasses are cheaper now than in the past but when faced with food or housing insecurity, they remain inaccessible to families of the lowest socioeconomic deciles, of which Pacific families predominate.

Further research is required to ascertain the volume of a more frequent readmission rate contributing to the excess hospitalisations of people of Pacific ethnicities. The readmission rate is an indicator of 1. How well the discharge care plan is communicated with primary healthcare, 2. How active primary healthcare is in the engagement of patients in their long-term condition management to prevent deterioration, 3. How accessible the multiple components of getting better and staying well are to the patient's family.

(Dr Corina Grey) As expected, this study of public hospital discharges confirmed gout, diabetes, bronchiectasis, pneumonia and cellulitis as significant causes of ill health among Pacific peoples in New Zealand. Unexpectedly, cardiomyopathy, candidiasis, gastric ulcer, hyperemesis gravidarum and SLE were also found to contribute to excess morbidity in Pacific peoples. Pacific peoples had hospitalisation rates for cardiomyopathy and candidiasis that were 5 to 6 times higher than that of the total population, and research is needed to understand the reasons behind these large disparities. Gastric ulcer and hyperemesis gravidarum are associated with *H. pylori* infection, which can be easily eradicated with antibiotic treatment. Treating the high rates of *H. pylori* infection among Pacific peoples may be one way to address the inequalities presented in this paper.

Reference: *J Prim Health Care.* 2010;2(2):105-10.

<http://www.nzcp.org.nz/assets/documents/Publications/JPHC/June-2010/JPHCSPSopoagaJune10.pdf>

Perspectives on adherence to blood pressure-lowering medications among Samoan patients: qualitative interviews

Authors: Wai KC et al

Summary: Twenty Samoan patients from an Auckland general practice participated in one-to-one semi-structured interviews using open-ended questions exploring their views on adherence or non-adherence to taking blood pressure-lowering medications. Ten patients with 'high' and 10 with 'lower' rates of adherence to taking usual medication were identified by medication possession ratio cut-offs from medical records of timely prescribing. Themes concerning lower adherence included 'lack of transport', 'family commitments', 'forgetfulness', 'church activities', 'feeling well' and 'priorities'. Themes relating to high rates of adherence included 'prioritising health', 'previous event', 'time management', 'supportive family members' and 'relationship with GP (language and trust)'. A theme common to both was 'coping with the stress of multiple comorbidities'.

Comment: (Dr Fiona Bell) I would recommend this article because this qualitative research enriches our understanding of the multiple factors identified by health consumers that affect their adherence to medication. The themes identified with Samoan patients also highlight that the process of medication prescription can be perceived by patients, or their families, as a doctor-centric act when patients are not accepting of either a diagnosis or prognosis, or they remain pre-contemplative about incorporating a new daily chemical habit into their family role. This is relevant not only to the healthcare of Samoans, but to people of other ethnicities, including other Pacific ethnicities.

Two of the adherent-conducive factors that can be modified by healthcare teams are the prioritisation of health over competing daily duties, and good relationships with health professionals. Good relationships require good communication. Every day, healthcare professionals try to motivate health consumers who have cultural values and beliefs different to their own. Both negotiation and motivation are easier when we use language that the other person is confident with, and when we understand the other's perspective. The cultural competency of prescribers can be enhanced by utilising translators, involving a patient-identified support person, and ensuring healthcare teams reflect the cultural mix of the population served. When we ask about people's lives with open-ended questions, demonstrate active listening and genuine interest, they will tell us who and what is relevant to them. For some, identity and family role may revolve around caring for grandchildren, mentoring multiple extended family relatives, or service to God and their faith community. For others, participation in a social club, maintaining independence as a driver or a gardener may be more important. Patient-identified reference points offer patient-centric justifications for prioritisation of and adherence to long-term medication for "invisible" conditions, before the catastrophic cardiovascular event.

Reference: *J Prim Health Care*. 2010;2(3):217-24.

<http://www.nzcp.org.nz/assets/documents/Publications/JPHC/September-2010/JPHCOSPWaiSept10.pdf>

Orbital infection in New Zealand: increased incidence due to socio-economic deprivation and ethnicity

Authors: Johnston NR, Sanderson G

Summary: All 530 cases admitted with acute orbital inflammation to public hospitals in New Zealand over a 9-year period (from 1 July 2000 to 30 June 2009) were examined in an attempt to identify the relationship between the incidence of orbital infection, ethnicity and socioeconomic deprivation in New Zealand. Orbital infection incidence was significantly related to socioeconomic deprivation and ethnicity. Cases in the moderate deprivation group had 1.5 times the rate of the least deprived group and the most deprived group had 2.9 times the rate of orbital infection of the least deprived group. Māori had 1.9 times the rate of the European group, and Pacific people had 3.6 times the rate of the European group.

Comment: (Dr Corina Grey) This is the first population-based study in the world to look at the effect of ethnicity and deprivation on the rate of orbital infection. Pacific peoples were reported to have an age- and deprivation-adjusted rate of orbital infection of 31 per 100,000 – 3.6 times the rate for Europeans and 1.7 times that for Māori. However, because prioritised ethnicity was used in this study, Pacific peoples who also identify as Māori would not have been included in the Pacific group. Therefore, the rate of orbital infection among Pacific peoples is likely to have been underestimated. Socioeconomic deprivation did not completely explain the health differences between Europeans and Māori or Pacific peoples in this study. The other factors contributing to these health disparities are unclear, but it is likely that educating Māori and Pacific peoples to present early to primary care with symptoms of eye infection may help avoid vision- and life-threatening complications.

Reference: *N Z Med J*. 2010;123(1320):50-7.

<http://www.nzma.org.nz/journal/abstract.php?id=4271>



15th South Pacific Nurses Forum

The New Zealand Nurses Organisation is excited to be hosting the 15th South Pacific Nurses Forum being held in November 2010, Auckland, New Zealand.

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Racial and ethnic disparities in cardiovascular medication use among older adults in the United States

Authors: Qato DM et al

Summary: This US-based investigation surveyed racial and ethnic disparities in the use of statins and aspirin among 3005 older community-dwelling adults (aged 57–85 years) at low ($n=812$), moderate ($n=977$), and high risk ($n=1066$) for cardiovascular disease (CVD) between June 2005 and March 2006. The paper reports the highest rates of use among respondents at high cardiovascular risk. Racial differences were highest among respondents at high risk, with Blacks less likely than Whites to use statins (38% vs 50%) and aspirin (29% vs 44%). Racial/ethnic disparities persisted after controlling for confounding factors.

Comment: (Dr Corina Grey) CVD remains one of the leading causes of mortality in Pacific peoples and is a major contributor to ethnic inequalities. The data from this population-based study were based on an in-home survey of individuals' actual medication use. This meant that accurate data could be collected on both prescription medications (primarily statins) and aspirin, which is available over-the-counter. In all cardiovascular risk categories, Blacks were less likely than Whites to be taking either aspirin or a statin. It is not known if similar ethnic disparities exist between Pacific and non-Pacific peoples in New Zealand. However, research suggests that adherence to cardiovascular medications is low (around 50%). Therefore, increasing the use of cardiovascular medications in Pacific peoples, especially those at highest risk, should be a top priority if we are serious about closing the health gaps in Pacific health.

Reference: *Pharmacoepidemiol Drug Saf.* 2010;19(8):834-42.

<http://onlinelibrary.wiley.com/doi/10.1002/pds.1974/abstract>

The effect of blood pressure and cholesterol variability on the precision of Framingham cardiovascular risk estimation: a simulation study

Authors: Marshall T

Summary: This simulation study explored the effects of within-individual variability in estimated cardiovascular (CV) risk on categorisation of patients as high risk, by using published estimates of within-individual BP and cholesterol variability to generate BP and cholesterol levels for hypothetical subjects at a range of ages. These were used to calculate the estimated CV risk of each individual. The relationship between an individual's mean CV risk and within-individual coefficient of variation for CV risk was determined, then used to calculate mean CV risk and within-individual variation in risk for 5018 adults from a population health survey. Lower-risk populations show greater within-individual variability in CV risk and potential for misclassification. At age 35–44 years, the positive predictive value of a diagnosis of high risk is 0.61, and at age 65–74 years, it is 0.94. About 39% of adults <45 years diagnosed as high risk are not at high risk.

Comment: (Dr Corina Grey) This study reminds us that the estimation of cardiovascular disease (CVD) risk is subject to diagnostic error in the same way as any other method of categorisation. However, CVD risk assessment must continue in spite of the possibility of error. Marshall found that diagnosing high CVD risk was most accurate in populations with a high prevalence of high risk. Pacific peoples are known to suffer a disproportionately high burden of CVD, and therefore should continue to be targeted for CVD risk assessment. Ensuring that a person's smoking and diabetic status is up-to-date and taking multiple measurements of blood pressure will help to minimise some of the variability in CVD risk.

Reference: *J Hum Hypertens.* 2010;24(10):631-8.

<http://www.nature.com/jhh/journal/v24/n10/abs/jhh2009114a.html>

Data and measurement issues in the analysis of health disparities

Authors: Bilheimer LT, Klein RJ

Summary: This paper discusses limitations of existing data sources for measuring health disparities and inequities, as well as current and emerging strategies designed to address those limitations. The authors recommend larger national sample sizes for identifying disparities for major population subgroups. Collecting self-reported race and granular ethnicity data may reduce some measurement errors, but it raises other methodological questions. Assessing health inequities presents particular challenges, requiring analysis of the interactive effects of multiple determinants of health. Indirect estimation and modelling methods are likely to be important tools for estimating health disparities and inequities for the foreseeable future.

Comment: (Dr Corina Grey) Although the authors of this paper are from the United States, the issues they raise are relevant to the work being done here in New Zealand on health inequalities. Small sample sizes are often a problem for researchers investigating Pacific health issues. If a study sample is not large enough, Pacific/non-Pacific differences will not reach statistical significance, and within-Pacific group differences cannot be identified. However, large sample sizes are often costly, so adapting the solutions suggested by these authors for the New Zealand landscape could be useful. Such techniques (which include oversampling, pooling data and modelling) will require the skill of multidisciplinary teams, highlighting the need to build capacity and capability in Pacific health research.

Reference: *Health Serv Res.* 2010;45(5):1489-1507.

<http://onlinelibrary.wiley.com/doi/10.1111/j.1475-6773.2010.01143.x/abstract>

A cost-based equity weight for use in the economic evaluation of primary health care interventions: case study of the Australian Indigenous population

Authors: Ong KS et al

Summary: This paper proposes a cost-based equity weight for applying during economic evaluation of interventions delivered from primary health care services. Based on achieving 'equitable access', existing measures of health inequity are suitable for establishing 'need'. However, the paper observes that magnitude of health inequity is not necessarily proportional to the magnitude of resources required to redress it. Instead, the authors suggest that equitable access may be better measured using appropriate methods of health service delivery for the target group. 'Equity of access' also suggests a focus on the processes of providing equitable health care rather than on outcomes, and therefore supports a cost-based weight that could improve the evidence base for resource allocation decisions.

Comment: (Dr Corina Grey) This analysis shows us that economic evaluations addressing equity, as well as efficiency, issues can highlight areas where there is the potential for most health gain. The authors looked at equity of access to primary health care services, an area which is particularly salient for Pacific health. Pacific peoples in New Zealand are known to have higher rates of ambulatory care-sensitive conditions than the total New Zealand population. Therefore, based on the concept of vertical equity, Pacific peoples should be accessing primary care health care services at a rate greater than that for the total population. The cost-based weighting mechanism proposed in this article could help policy makers in New Zealand determine which interventions to improve health care access for Pacific peoples should be implemented.

Reference: *Int J Equity Health.* 2009;8:34.

<http://www.equityhealthj.com/content/8/1/34>



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