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Asthma in Māori

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A thesis presented in partial fulfilment of the requirements

for the degree of

Doctor of Philosophy

in Epidemiology

at Massey University, Wellington, New Zealand

May 2004



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00/03/010 – The role of non-allergic airway inflammation in childhood asthma (this includes the ISAAC Phase III survey)
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Abstract

The research presented in this thesis arose out of work done by the Māori Asthma Review (Pomare et al, 1991). The Māori Asthma Review was undertaken because of concern regarding the excessive number of deaths and hospitalisations from asthma among Māori people, even though evidence at that time, was that asthma prevalence was similar between Māori and non-Māori children. One of the key findings from the review was that there were a combination of barriers for Māori when accessing asthma services, which were almost certainly reflected in more severe asthma and higher hospital admission rates.

This thesis has involved conducting three pieces of new research: (i) a series of reviews and analyses of descriptive data on asthma prevalence, hospitalisations and mortality in Māori and non-Māori; (ii) analyses of the ethnicity data from the International Study of Asthma and Allergies in Childhood (ISAAC) Phase III Wellington survey; and (iii) a follow-up study of Māori adolescents with asthma examining factors affecting asthma severity, access to health care and asthma quality of life in this adolescent population.

The mortality analyses showed that Māori were disproportionately affected by the asthma epidemics during the 1960s and 1970s and that while the asthma mortality rates have declined now, they remain higher in Māori than in non-Māori. Asthma hospitalisation rates continue to be higher in Māori compared to non-Māori across all age groups. Hospital admission rates are generally higher in rural areas for Māori whereas those for non-Māori are higher in urban areas. Analyses of the ISAAC Phase III data show that Māori children are experiencing both greater asthma symptom

prevalence and increased asthma severity compared with non-Māori children and that this is not explained by risk factors such as smoking. In the follow-up study of Māori adolescents, baseline asthma severity and frequency of wheeze were important determinants of subsequent morbidity. Having an asthma action plan, a peak flow meter and having routine visits to the general practitioner were all associated with small improvements in asthma quality of life during the one year follow-up. The only significant predictor of access problems during the one year follow-up was having had access problems at baseline. Cost was the most significant barrier to accessing care for these families.

Asthma continues to be a significant health problem for Māori. The research conducted for this thesis supports and extends previous research indicating that asthma is more severe in Māori, because of problems of access to health care. It also indicates that differences in asthma prevalence between Māori and non-Māori are now being seen in children as well as adults, and that management and treatment issues underlie the emerging increase in asthma prevalence among Māori. Attention to access issues across mainstream health structures along with support for Māori provider organisations should continue. Additionally, active approaches to monitor differential treatment and barriers to effective interventions are needed.

Acknowledgements

This work was undertaken during my tenure as a Health Research Council of New Zealand Māori Health Training Fellow, and a project grant from the Health Research Council of New Zealand funded the research presented in Chapters Six and Seven.

To those students and their parents who gave up their time to take part in the follow-up study presented in this thesis (Chapter Seven), my grateful thanks and heartfelt appreciation to you all.

To Neil Pearce. I could not have found a more competent and ‘human’ epidemiologist than you. I am hugely indebted to you for giving me the focus, the time and the consistent encouragement needed to write this thesis.

To Shelley Gray who has been central to all of this work. I can never thank you enough for the energy and effort that you gave to all aspects of this project.

To Te Taumata Mate Ha o Aotearoa, my original training fellowship was negotiated between yourselves and Neil Pearce. Thank you making me feel so welcome and for the sharing of your insight and knowledge.

Tū Kotahi Māori Asthma Trust, my sincere thanks to you all for listening and supporting this work over the years.

To my colleagues at the Centre for Public Health Research. You have all been so excellent. Many thanks for your encouragement throughout this whole process and particularly over the last few months.

To my father, Pirihana Ellison from Rangiātea, and my mother, Antoinette Loschmann, from Ra'iatea, maruru roa.

To Brenda Charles, who over these years of writing (and before) has nurtured and cared for my children.

To Jeremy, Hanahiva, Edi and Taiaroa. For all those things that make me truly happy.

To Irihapeti Ramsden. I often wish I could talk with you again. Thank you for the inspiration to start and finish this.

Kei te mihi te ngākau ki ēnei tangata mō te aroha me te manakītanga ki ahau. Tēnā koutou, tēnā koutou, tēnā koutou katoa.

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