Inequalities in asthma prevalence, morbidity and mortality

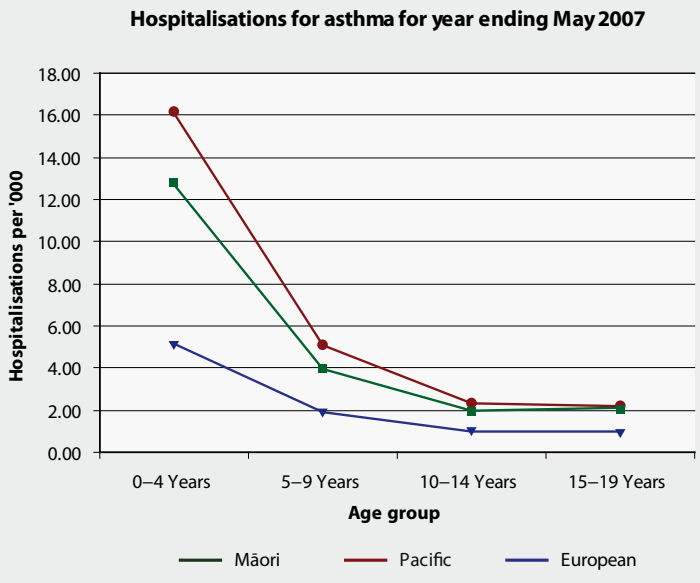
A Portrait of Health – Key results of the 2006/07 New Zealand Health Survey, reports that one in seven children aged 2–14 years (14.8%) had been diagnosed with asthma and were taking medication for this condition.[13] Adjusted for age, Māori children had a significantly higher rate of taking medication for asthma than children in the total population. Asian girls had significantly lower rates of medicated asthma.

Prevalence rates (Māori 26%, Pacific 22%, European/other 20%) are higher for Māori and Pacific children and this disparity increases with age.

Māori and Pacific children with asthma suffer more severe symptoms than other children,[7] are hospitalised more frequently and have more days off school as a result of their asthma.

Deaths from asthma are uncommon, and largely preventable. However, Māori are over 4 times more likely to die of asthma than non-Māori.

Known risk factors do not seem to explain these differences, neither is there evidence to suggest genetic or biological reasons for the increased burden of asthma among Māori



The disparity is greatest when considering Māori and Pacific children are 2–3 times more likely to be admitted to hospital for asthma than European/other children. Rates of hospitalisation are highest among Māori and Pacific pre-school and early school-aged children compared with European/other children.

Asthma is a health priority for Māori and Pacific children because it is more common, more severe and more likely to be fatal across all age-groups.

and Pacific children. Environmental triggers for asthma, and other significant health issues should be identified and managed during the primary care consultation.

Data shows that the ratio of reliever to preventer dispensings is higher in Māori and Pacific children than in European/other children (see accompanying prescribing report). This means that Māori and Pacific children are more likely to depend on an asthma reliever (such as salbutamol) and less likely to use inhaled corticosteroids than European/other children.

Asthma education is critical to effective self management. However studies have shown that Māori children and adolescents with asthma had lower levels of parental asthma knowledge, received less asthma medication, less asthma education, had more problems with accessing asthma care, and were less likely to have an action plan.

The challenge is for primary care to address these disparities. Key approaches include:

Setting realistic practice goals

- Ensure all children with asthma have access to appropriate medication
- Ensure all children with asthma have an up-to-date asthma management plan
- Record household smoking status
- Identify the person in the whānau who usually supervises the child's inhaler and spacer use

Building a trusting therapeutic relationship with patients and whānau

- Find out what whānau already know about asthma and their expectations regarding your role
- Discuss where the child fits within the whānau. Are there others in the whānau with asthma?
- Asking about housing conditions; is the house smokefree? Is the whānau living in damp housing conditions?
- Find out how asthma is affecting the whānau and child's life

Agree on realistic patient-centred health goals

- Ensure a realistic expectation of control
- Educate children with asthma and whānau about what level of asthma control is normal and how to achieve this
- Ensure every child has an asthma management plan
- Encourage and explain the benefits of a smoke free environment
- Make it easy for children and whānau to come back

Form Partnerships

- Consider referral to specialist asthma services, asthma educators, Māori providers and other specialist services where available and appropriate

Further reading

See BPJ 13 – Asthma and chronic cough in Māori children.[8]

Trying to Catch Our Breath. The burden of preventable breathing diseases in children and young people. The Asthma and Respiratory Foundation of New Zealand, 2006.

References and bibliography

1. Management of Asthma in Children Aged 1 – 15 Years. Paediatric Society of New Zealand, 2005.
   Available from: http://www.nzgg.org.nz Keyword:asthma
2. British Thoracic Society; Scottish Intercollegiate Guidelines Network. British Guideline on the Management of Asthma, May 2008.
   Available from http://www.sign.ac.uk Keyword:asthma
   (Accessed September 2008)
3. AMH. Asthma Management Handbook. National Asthma Council of Australia, 2006.
   Available from: http://www.nationalasthma.org.au/cms/index.php
   (Accessed September 2008)
4. ISAAC Steering Committee. Worldwide Variation in Prevalence of Symptoms of Asthma, Allergic Rhinoconjunctivitis and Atopic Eczema: ISAAC. Lancet. 1998;351:1225-7.
5. Asher M, Barry D, Clayton T, Crane J, D'Souza W, Ellwood P, et al. The Burden of Symptoms of Asthma, Allergic Rhinoconjunctivitis and Atopic Eczema in Children and Adolescents in Six New Zealand Centres: ISAAC Phase One. NZ Med J. 2001;114:114-20.
6. Asher MI, Stewart AW, Clayton T, Crane J, Ellwood P, Mackay R, et al. Has the prevalence and severity of symptoms of asthma changed among children in New Zealand? ISAAC Phase Three. NZ Med J. 2008;121:52-63.
7. Pattemore PK, Ellison-Loschmann L, Asher MI, Barry DM, Clayton TO, Crane J, et al. Asthma prevalence in European, Māori, and Pacific children in New Zealand: ISAAC study. Pediatric Pulmonology. 2004;37(5):433-42.
8. BPAC. Asthma and chronic cough in Māori children. Best Practice Journal May 2008;13:20-4.
   Available from http://www.bpac.org.nz Keyword:cough
9. Chang AB et al. Cough in children: definitions and clinical evaluation. Position statement of the Thoracic Society of Australia and New Zealand. MJA 2006; 184:398-403.
10. Van Asperen PP, Mellis CM, Sly PD. The role of corticosteroids in the management of childhood asthma. MJA 2002;176:169-74.
11. Masoli M, Weatherall M, Holt S, Beasley R. Systematic review of the dose response relation of inhaled fluticasone propionate. Arch Dis Child 2004;89:902-7.
12. Mckean M, Ducharme F. Inhaled steroids for episodic viral wheeze of childhood. Cochrane Database of Systematic Reviews (Online). 2000(2):CD001107.
13. Ministry of Health (2007). Portrait of Health, Ministry of Health: Wellington.
   Available from http://www.moh.govt.nz Search:portrait
14. Early Exposure to Tobacco Smoke. Karolinska Institutet (July 2008)
   Available from http://ki.se Select English and Keyword:Tobacco
15. Gilliland, FD, Islam T, Berhane, K, Gauderman, WJ, McConnell, R, Avol, E, and Peters, JM. Regular smoking and asthma incidence in adolescents. American Journal of Respiratory and Critical Care Medicine Vol 174. pp. 1094-100, (2006).
16. Clearing the Air: Asthma and Indoor Air Exposures (2000)
   Committee on the Assessment of Asthma and Indoor Air, Division of Health Promotion and Disease Prevention, Institute of Medicine. National Academies Press, 2000.
   Available from http://www.nap.edu Keyword:asthma
17. Pattemore P. Intermittent Asthma in Children. NZ Fam Physician 2008;35(3):207-10,