

ResearchSpace@Auckland

Suggested Reference

Vogel, A., Trenholme, A., Lennon, D., McBride, C., Stewart, J., Best, E., . . . Percival, T. (2011). Household Characteristics of Children Under Two Years Admitted with Lower Respiratory Infection in South Auckland. Poster session presented at the meeting of Thoracic Society of Australia and New Zealand Annual Scientific Meeting. Perth, Australia.

Copyright

Items in ResearchSpace are protected by copyright, with all rights reserved, unless otherwise indicated. Previously published items are made available in accordance with the copyright policy of the publisher.

<https://researchspace.auckland.ac.nz/docs/uoa-docs/rights.htm>

Household Characteristics of Children Under Two Years Admitted with Lower Respiratory Infection in South Auckland

Alison Vogel¹, Adrian Trenholme^{1,2}, Diana Lennon^{1,2}, Charissa McBride¹, Joanna Stewart³, Emma Best⁴, Henare Mason¹, Teuila Percival^{1,2}

¹Kidz First Hospital, Auckland 1640, ²Department of Paediatrics, University of Auckland, Auckland, ³Dept Epidemiology and Biostatistics, FMHS, University of Auckland; ⁴Department of Molecular Medicine, FMHS, University of Auckland

Background

South Auckland children have high rates of admission with Lower Respiratory Infection (LRI).

Objectives

This study aimed to describe the family and patient characteristics of admissions for LRI in children aged less than two years as baseline prior to the introduction of conjugate Pneumococcal vaccine (PCV7).

Methods

- Children admitted from August to December 2007 with LRI aged less than two years were recruited to the study.
- A face to face questionnaire covering family characteristics including maternal age, smoke exposure, heating, and number in the house was completed for each child.
- Relative risk of subgroups for at least one admission was calculated using the CMDHB 2007 birth cohort (data from National Minimum DataSet) as the denominator.
- In those admitted to hospital with LRI an analysis of risk factors related to total length of hospital stay in the 5 months of the study was performed. A general linear model was fitted with the log of the total length of stay (the sum of all admissions) for a child as the outcome and child's age (at start of study), mothers age, ethnicity of child, deprivation index of home address (coded as 1-8 or 9,10) whether or not premature (<36 weeks), household density (number of rooms in house divided by the number of people in the house), number of smokers in the home and whether or not there was a source of heating in the house included as explanatory variables.
- A nasopharyngeal aspirate was taken from each consented child for viral studies (reported separately).
- The study was approved by the Northern Regional Ethics Committee (NTX/07/07/059).

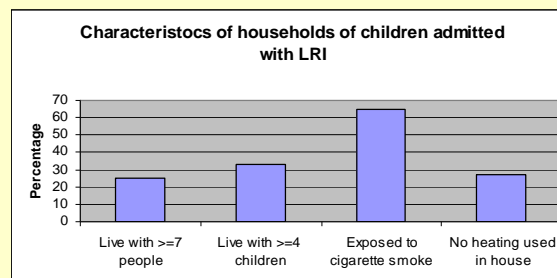
Results

- There were 580 admissions with LRI involving 465 children, 394 of whom had completed questionnaires (85% response rate).
- Children included in the study were similar to all admissions with LRI in ethnicity and deprivation.
- 64% of admissions had a diagnosis of bronchiolitis and 26% of pneumonia.
- Seventy one (18%) had more than one admission and number of admissions ranged from 1 to 6
- Length of stay ranged from 1 to 27 days with a median of 3.
- There were a total of 121 ICU bed days in 21 (5%) patients.

Ethnicity and deprivation

	RR admission	95% CI
Maori vs European/Other	4.4	3.2, 6.2
Pacific vs European/Other	5.8	4.4, 7.9
Decile 9 and 10 vs 1-8	3.1	2.4, 3.9

Household characteristics



- Thirty nine percent of Pacific families compared with 11% of Maori and 11% of other families had no source of heating.
- Modelling showed that longer total stay was more likely in those of younger age, who were premature or of Maori or Pacific ethnicity.

Conclusions

- We have confirmed the known increased risk of admission for Pacific and Maori children and those living in deprived circumstances.
- Among the group of children admitted to hospital with LRI Maori and Pacific children also have a greater cumulative days stay.
- Among young children admitted with LRI in South Auckland there is a high rate of exposure to known avoidable risk factors such as smoking, lack of heating and large households in overcrowded conditions.
- Initiatives to address these risk factors are important eg smoking cessation and the Healthy Housing programme.