

Examining asthma incidence in an Australian prospective cohort: the North West Adelaide Health Study



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INTRODUCTION

The North West Adelaide Health Study is a representative population cohort of adults living in the north western region of Adelaide, the capital of South Australia, designed to examine the prevalence and incidence of chronic conditions, including asthma.

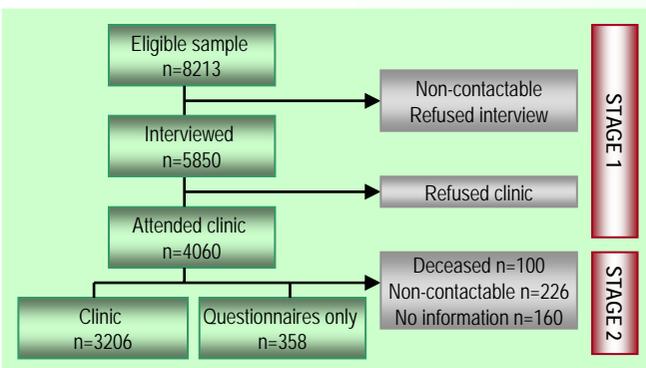
METHODS

Stage 1

In this baseline stage of the North West Adelaide Health Study, all households within the north west region of Adelaide with a telephone connected and the telephone number listed in the Electronic White Pages were eligible for random selection. Within each household, the person who had their birthday last and was aged 18 years or older, was selected for interview and invited to attend the study clinic. Of those interviewed (n=5850), 69% participated in the clinic visit (n=4060). Data was obtained from self-reported questionnaires and biomedical measurements.

Stage 2

Of the 4060 participants in Stage 1, 100 had died, leaving 3960 to be contacted, of which 81% (n=3206) attended the Stage 2 clinic.



Asthma

Participants with diagnosed asthma were defined as those who self-reported having been told by a doctor that they have current asthma. Those with undiagnosed asthma did not report being told by a doctor that they had the condition, but had at least a 12% increase in FEV₁ and >200mL post bronchodilator.

RESULTS

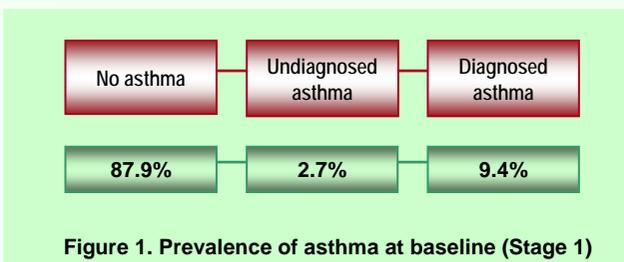


Figure 1. Prevalence of asthma at baseline (Stage 1)

At baseline, the prevalence of asthma was 12.0% (95% CI 11.1-13.1), with 9.4% diagnosed and 2.7% undiagnosed (Figure 1).

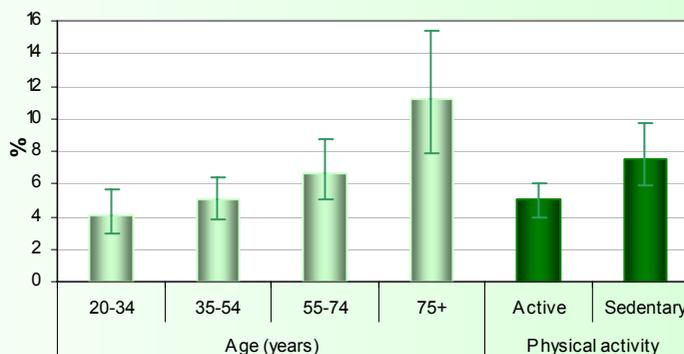


Figure 2. Proportion who developed asthma between Stage 1 and Stage 2, by age group and physical activity

Of those without asthma at Stage 1, 5.7% (n=163) developed asthma by Stage 2 (3.2% diagnosed, 2.5% undiagnosed). In addition, 28.7% (n=100) of those with diagnosed or undiagnosed asthma in Stage 1, did not have asthma by Stage 2.

The proportion of respondents who developed asthma between Stage 1 and Stage 2 was significantly higher among those who were older, physically inactive (Figure 2, p<0.05), or had a gross annual household income of \$20,000 or less, and significantly lower among those who were employed full time (Figure 3). The associations between development of asthma and age and physical activity remained after controlling for age. Other variables examined, including education, smoking status, and obesity, were not associated with development of asthma.

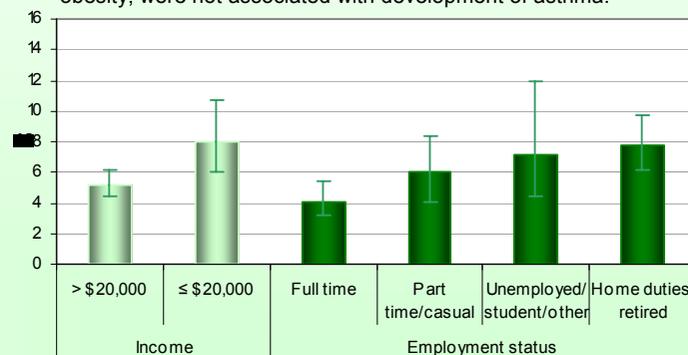


Figure 3. Proportion who developed asthma between Stage 1 and Stage 2, by income and employment status

CONCLUSIONS

The proportion of respondents who developed asthma over the Study period was 5.7% but this was higher among those who were older or physically inactive.