



Anne W Taylor¹, Catherine R Chittleborough¹, David H Wilson², Robert Adams², Sandra Pickering², Richard E Ruffin², and the North West Adelaide Health Study Team

¹ Population Research and Outcome Studies Unit, Department of Health, Adelaide, Australia

² Department of Medicine, University of Adelaide, The Queen Elizabeth Hospital and Health Service, Adelaide, Australia

INTRODUCTION

Asthma is recognised as a health priority in Australia because of the significant burden it places on the community in terms of health, social and economic costs. This study examined costs of diagnosed and undiagnosed asthma by linking a representative population cohort to universal administrative Health Insurance Commission (HIC) Medicare Benefits Schedule (MBS) data.

METHODS

The North West Adelaide Health Study (NWAHS) is a representative population cohort of adults aged 18 years and over living in the north western region of Adelaide. All households within this region with a telephone connected and the telephone number listed in the Electronic White Pages were eligible for 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 who were interviewed, n=2523 attended the clinic, resulting in a clinic participation rate of 69%. The current analyses are based on the 2352 participants (93.2%) for whom linked HIC data were provided for the five-year period 1 July 1997 to 30 June 2002. Medicare claims data include those services that qualify for a Medicare Benefit and for which a claim has been processed.

Participants with asthma were defined as those who reported having been told by a doctor that they have asthma, or those who had a 12% (and >200ml) increase in FEV1 post-bronchodilator. Participants with undiagnosed asthma were those who had the condition according to reversibility but did not report being diagnosed by a doctor.

RESULTS

The prevalence of diagnosed asthma was 9.5% (95% CI 8.4 – 10.8), with an additional 2.1% (95% CI 1.6 – 2.7) previously undiagnosed (Table 1).

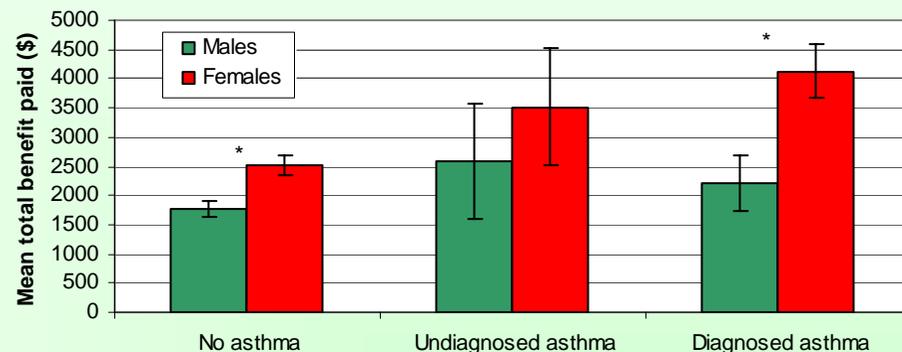
Table 1. Prevalence of diagnosed and undiagnosed asthma (n=2352)

	%	% of Asthma	Ratio
Diagnosed asthma	9.5	82.1	4.6
Previously undiagnosed asthma	2.1	17.9	1.0
No asthma	88.4		
Total	100.0		

Table 2. Mean MBS benefit paid (\$AUS) and number of services for participants without asthma, with undiagnosed asthma or diagnosed asthma

	Cost (\$)		Number of services	
	Mean	(SD)	Mean	(SD)
No asthma	2155.97	(2563.87)	62.35	(60.64)
Undiagnosed asthma	3118.91	(2562.56)	85.50	(60.69)
Diagnosed asthma	3385.59	(2565.88)	92.01	(60.76)

Over the five-year period, and controlling for the effects of age and sex, the mean cost of MBS benefit paid and mean number of MBS services were significantly higher among those with diagnosed or undiagnosed asthma than those without asthma (Table 2). The significantly higher mean MBS cost for those with diagnosed asthma held true for females, but not males (Figure 1).



* Statistically significant difference between males and females (p<0.05)

Figure 1. Mean MBS benefit paid for males and females without asthma, with undiagnosed asthma or diagnosed asthma

CONCLUSIONS

Asthma is associated with increased medical costs and service use. This relationship, however, is significant only among females. Males, both with and without asthma use less services, associated with a lower medical cost, which may have implications for asthma prevention and management.