

## INTRODUCTION

Obesity is recognised as a growing health issue in South Australia, as in many developed and developing countries around the world. A high body mass index (BMI) is known to increase the risk of ill health, leading to lowered quality of life and increased demand for health services. With finite health care resources available, it is important to understand the way in which resources are currently being used, and the reasons behind such use. Such understanding will assist with planning to meet future demands, and ensure the best use is being made of the resources that are available.

The North West Adelaide Health Study (NWAHS) examined the impact obesity has on health service resource use through Health Insurance Commission (HIC) Medicare Benefits Schedule (MBS) rebates paid for eligible services and self reported service use. MBS data are considered to be good indicators of health system use and health status.

## METHODS

The NWAHS examined the prevalence of chronic conditions, including obesity, using a representative sample of adults living in the north western region of Adelaide. All households with a telephone connected and listed in the Electronic White Pages were eligible for selection. Within each household, the person who had their birthday last and was 18 years or older, was selected for interview and invited to attend the clinic. The clinic participation rate was 69%.

Consent for the release of HIC MBS rebate data was requested from NWAHS clinic participants. Data were matched for 93% (n=2352) of the 2523 participants. This data included MBS item number, date of use and rebate paid for the five year period July 1997 to June 2002.

BMI was calculated from measured height and weight in kg/m<sup>2</sup>. Results were available for 2351 participants.

## RESULTS

The proportion of participants in each BMI category, for whom MBS data were successfully matched is shown in Table 1.

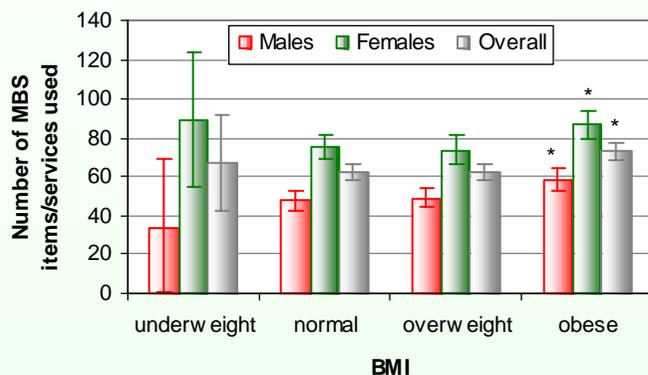
**Table 1: Prevalence of BMI categories (n=2351)**

	Males (n=1129) %	Females (n=1221) %	Overall (n=2351) <sup>#</sup> %
Underweight (< 18.5)	0.7	1.3	1.0
Normal (18.5 to < 25)	28.7	39.7 ↑	34.4
Overweight (25 to < 30)	44.7	27.5 ↓	35.7
Obese (≥ 30)	26.0	31.5 ↑	28.9
<b>Total</b>	100.0	100.0	100.0

↑↓ Females statistically significantly higher or lower than males (p<0.05)

# Weighting may result in totals not adding

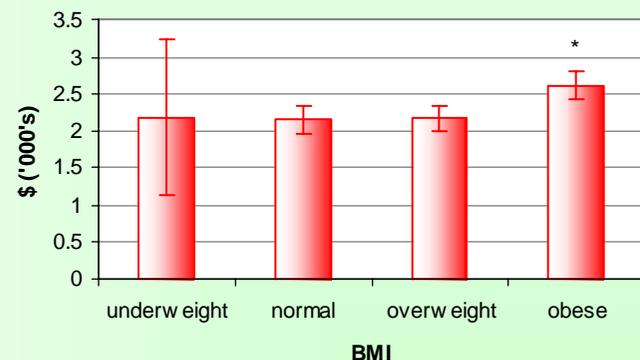
Participants classified as obese were found to use statistically significantly more MBS services than those with a BMI in the normal range (Figure 1). Within the normal, overweight and obese BMI categories, females had a statistically significantly higher mean MBS service use than males.



\* Obese BMI statistically significantly higher than normal BMI (p<0.05)

**Figure 1: Mean number of MBS services used (1997-2002), by BMI category, controlled for age**

The total rebates paid per person for these services followed a similar pattern (Figure 2). The mean MBS rebate paid was statistically significantly higher among participants classified as obese than those with normal BMI. This association remained when controlled for age and sex. The mean rebate paid was statistically significantly higher among overweight than normal BMI, but this difference disappeared when results were controlled for age and sex.



\* Obese BMI statistically significantly higher than normal BMI (p<0.05)

**Figure 2: Mean MBS rebate paid 1997-2002 by BMI, controlled for age and sex**

## CONCLUSIONS

- Obesity is associated with increased health service use and associated costs.
- Given that the prevalence of obesity is increasing, health promotion programs play an important role in reducing and preventing obesity in the population.
- Any reduction in total resource use among the obese group is likely to make a dramatic impact on overall health resource use, and make available valuable resources for other purposes.

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