Patterns of asthma medication use in Australia

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Australian Centre for Asthma Monitoring

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Australian Institute of Health and Welfare

Board Chair
Hon. Peter Collins, AM, QC

Director
Penny Allbon

Any enquiries about or comments on this publication should be directed to:

Australian Centre for Asthma Monitoring
Woolcock Institute of Medical Research
GPO Box M77
Missenden Road
Camperdown NSW 2050
Phone: (02) 9515 5226 (International +61 2 9515 5226)
Email: acam@asthmamonitoring.org

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Contents

Acknowledgments ..... **vii**

Abbreviations ..... **viii**

Summary ..... **ix**

1 Introduction **1**

Key points 1

1.1 Background 1

1.2 Study aims 3

1.3 Study data 3

1.4 Structure of this report 6

2 Population distribution of asthma medication use **7**

Key points 7

2.1 Introduction 7

2.2 Methods 7

2.3 Results 10

2.4 Discussion 19

3 Individual use of asthma medications **21**

Key points 21

3.1 Introduction 21

3.2 Methods 21

3.3 Results 22

3.4 Discussion 29

4 Inhaled corticosteroid potency **31**

Key points 31

4.1 Introduction 31

4.2 Methods 31

4.3 Results 33

4.4 Discussion 38

5 Relationship between asthma medication classes **39**

Key points 39

5.1 Introduction 39
5.2 Methods 39
5.3 Results 40
5.4 Discussion 44
6 Conclusions 45
Key points 45
6.1 Summary and implications of findings 45
6.2 Limitations 47
6.3 Possible future uses of PBS data 48
Appendix 1: PBS items included in the asthma medications data set 50
Appendix 2: PBS data processing 52
Appendix 3: Denominator populations 53
Glossary 54
References 56
List of tables 59
List of figures 60

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Abbreviations

ABS	Australian Bureau of Statistics
ACAM	Australian Centre for Asthma Monitoring
AH	accuhaler
ASGC	Australian standard geographic classification
ATC	Anatomical Therapeutic Chemical
CI	confidence interval
COPD	chronic obstructive pulmonary disease
DDD	Defined daily dose
MDI	metered dose inhaler
mg	milligram(s)
NHS	National Health Survey
PBS	Pharmaceutical Benefits Scheme
PIN	Patient identification number
RPBS	Repatriation Pharmaceutical Benefits Scheme
RR	rate ratio
SEIFA	Socio-Economic Index for Areas
TH	turbuhaler
µg	microgram(s)

Summary

The issues

Drug therapy is the cornerstone of treatment for controlling asthma and preventing and relieving attacks. It is important that the medications are used in the appropriate manner and this varies with the type of medication. Past studies have looked at how people use their asthma medications, but these have been of relatively small scale. This study is the first to use national data to examine the patterns of medication use for asthma.

The methods

Records of medications commonly used to treat asthma that were dispensed during the period July 2002 to June 2004 were obtained from the Pharmaceutical Benefits Scheme (PBS) database. To ensure complete confidentiality, each record had a patient identification number (PIN) representing the person to whom the medication was prescribed. This PIN enabled multiple prescriptions for the same person to be identified, and the person's basic demographic characteristics, such as age, sex and postcode, to be included in the record, without revealing the identity of the person. Using these data it was possible to look at the patterns of asthma medication use and to compare this with the recommendations contained in guidelines for asthma care. It was also possible to study the influence of a person's demographic characteristics on their patterns of medication use.

The findings

Incorrect use

Most people who use inhaled corticosteroids use them intermittently, even though guidelines recommend that these drugs be used regularly by those who need them. Most adults also use the strongest formulations of inhaled corticosteroids, even though less potent formulations are often effective and have fewer side effects.

Correct use

Most people take short-acting reliever drugs (such as Ventolin™) occasionally, suggesting better use of this medication class, which should not be needed regularly if symptoms are under control.

Barriers to use

People living in remote areas use asthma medications less than people living in cities. This may reflect differences in the accessibility of health care services.

People with concession cards, who are able to purchase medications at a much cheaper price than general patients, use more inhaled corticosteroids than general patients. This raises the possibility that the price charged to general asthma patients represents a barrier to the use of inhaled corticosteroids.

Some limitations

- Although this report focuses on the use of medications for asthma, the available data do not contain information on the reason for which the drug was prescribed. The medications that are used for asthma are also used for the treatment of some other medical conditions, in particular, chronic obstructive pulmonary disease. However, this disease occurs predominantly in older individuals. For this reason the subgroup of people aged 5 to 34 years was also investigated. In this subgroup the medications were highly likely to have been used for asthma.
- A further limitation is that there was no information on the patient's level of disease severity, which made it difficult to determine how well particular drugs are being used.
- Not all medications used for the treatment of asthma come through the PBS. In particular, short-acting bronchodilators are often bought without a prescription, and are usually only acquired through the PBS when the patient holds a government concession card. Therefore some of the analyses had to be limited to patients who have a concession card.

Further study

The inclusion of demographic information in the PBS database has expanded the opportunities for further studies into medication use. The methods used in this study could prove useful for investigations of medication use for other conditions and diseases. Such studies will provide some important insights into how well the current use of drugs compares with best practice standards.