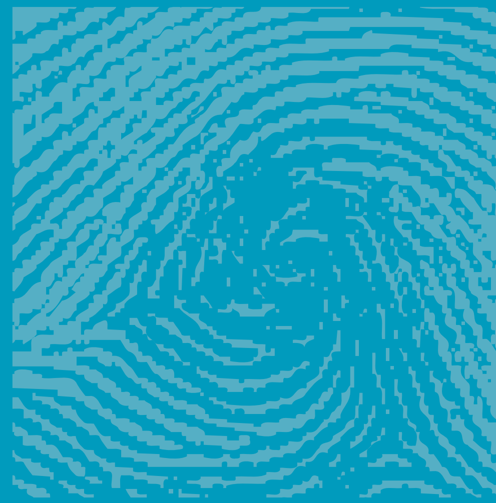
Hospital Demand Management Strategy
Hospital Admission Risk Program (HARP)

Asthma Management Bulletin



Victoria
The Place To Be

The impact of asthma

Over the last decade, advances have been made in asthma care in Australia that have contributed to the steady decline in asthma-related deaths[1]. However, despite this Australia is faced with increasing prevalence and perhaps increasing severity of asthma[1].

Asthma is a chronic condition with attacks occurring in individuals at varying intervals and with varying degrees of severity. Over many years, persistent asthma may cause permanent narrowing of the airways resulting in a reduced responsiveness to available treatments[1].

In 1999, 424 Australians died from asthma. More than half of these deaths were in adults over the age of 60[2]. However, asthma is more prevalent in young people (aged under 25) than in older groups[3]. The prevalence of asthma in Australia increased from 8.5% in 1989–90 to an estimated prevalence of 11.6% in 2001[4]. Currently in Australia, 2.20 million people have asthma that has lasted or is expected to last for six months or more[4].

For individuals with asthma, the condition can have a large impact on their quality of life. For physical and social functioning, role limitations, bodily pain, vitality and general health people with asthma are reported to have lower scores than those without asthma[3]. Many people with asthma require a range of health services, from general practitioner care to emergency department visits or hospital inpatient care.

In 1999-2000, asthma was the fourth most common reason for admission to hospital[4] and accounted for 14 per cent of all hospital admissions for diseases of the respiratory system within Australia[3]. In addition, asthma is one of the most frequent reasons for hospitalisation among children. The greatest concentration of asthma related health care costs is for children aged 0-14 and adults older than 65 years. These two groups accounted for 66 per cent of the hospital services costs and 53 per cent of the pharmaceutical costs for asthma[4].

Asthma in the context of HARP

The Hospital Admission Risk Program (HARP) is a prevention strategy aimed at reducing the demand pressures on hospitals by averting the avoidable use of emergency departments and inpatient services. HARP funded initiatives focus on people who have a manifest health need, often where their condition is chronic or complex.

Although HARP is targeting demand pressures on acute hospitals, it spans the continuum of care. The emphasis is on better supporting and proactively managing people in their homes and within the community rather than reactively responding to acute exacerbations of conditions such as asthma. By strengthening and working across the continuum of care people will be more effectively cared for.

HARP is a targeted program focusing on secondary and tertiary prevention. HARP funded initiatives targeting asthma focus on patients already diagnosed with asthma and are directed to ensure timely treatment in order to minimise asthma symptoms, reduce asthma severity, reduce exacerbations and prevent disease progression.

For the 19 hospitals participating in HARP there were 7,345 separations for asthma and bronchitis (DRG: E69) in 2000-01 using a total of 15,387 bed days. The impact of asthma varies across these hospitals but asthma ranked fifth as a principal reason for admittance to hospital. For each of the 19 hospitals participating in HARP asthma is within the top 20 Diagnostic Related Groups.

Figure 1 outlines the demand pressure asthma has on individual hospitals for total separations and average length of stay for the year 2001-02.

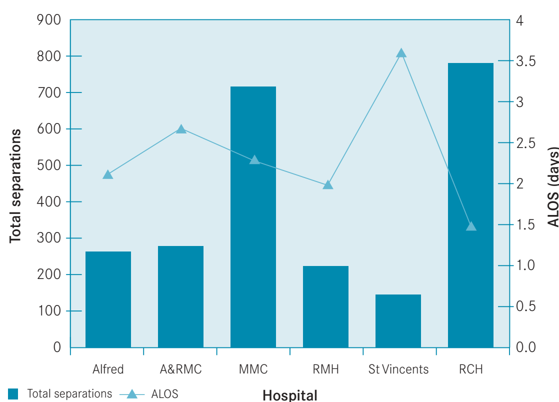
The literature indicates that by taking up the opportunities to reduce asthma symptoms, particularly through the organisation of the delivery of care, reductions in the utilisation of hospitals is likely to result[5].

Asthma management and control using secondary and tertiary prevention strategies

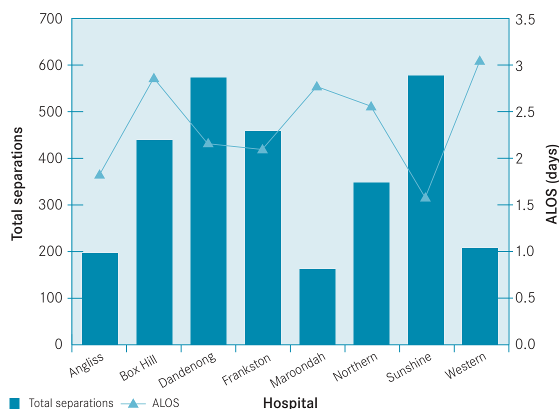
Hospitalisation is considered an important marker of asthma severity and is a potentially avoidable outcome for people with asthma. Hospitalisation is also an indicator of poorly controlled asthma.

Figure 1: Average length of stay (ALOS) and total separations for asthma in Victorian public hospitals for 2001-02

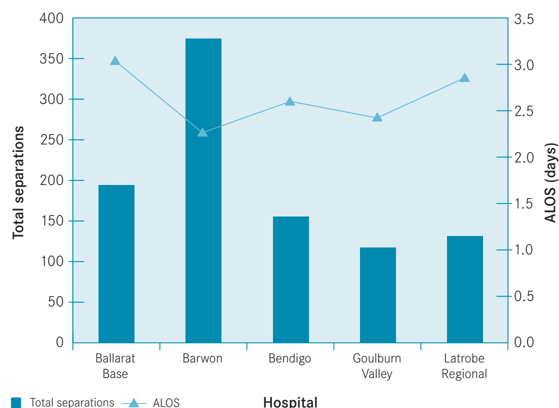
A1 metropolitan hospitals



Other metropolitan hospitals



Rural hospitals



Data Source: Victorian Admitted Episodes Dataset

Asthma can be managed through a broad range of strategies that are designed to decrease the severity of asthma and minimise the use of acute health services. It is useful to conceptualise the strategies for managing asthma as either occurring in a community setting or occurring in a hospital setting.

Asthma management in the community setting

Asthma management in the community setting includes education strategies for children and adults, the use of written asthma management plans, self-management techniques and the use of psychological interventions to address psychological aspects of asthma management. A brief outline of current research findings related to asthma management in the community setting follows.

Asthma education

Asthma self-management education provides individuals with the skills and resources necessary to effectively self manage their illness. These programs include information such as preventing asthma exacerbations, communicating with health care professionals and symptom management[5]. At its simplest, education is limited to the transfer of information about asthma, its causes and its treatment. At its most complicated, asthma education is an intervention that aims to assist individuals to develop high level self-management behaviours.

The evidence for information only strategies in preventing demand is somewhat contradictory. For adults, the evidence implies that information only asthma education delivered by health professionals can reduce ED visits and improve knowledge, but does not translate to a reduction in hospitalisation rates. For children, there is sufficient evidence to support asthma education as effective in better managing the symptoms of asthma. However, there is limited evidence to support asthma education for children who have attended ED in the last year reducing health service utilisation[4].

Written Asthma Plans

Poor adherence to medication can account for a large proportion of the asthma morbidity and health care utilisation. One strategy to increase patient adherence and self-management is the use of Written Asthma Management Plans (AMP). A review of the evidence was inconclusive about the effectiveness of AMPs alone. However, it did conclude that 'optimal self-management' consisting of an AMP for the use and adjustment of medications, education for self monitoring of asthma via symptoms or airflow, and regular review of these activities

by a health professional can result in clinically and statistically significant improvements in asthma outcomes[4].

Less intensive interventions are less efficacious, particularly those without an AMP. Further, patient's engaging in optimal self-management education are able to adequately adjust their medication with a written asthma plan without attending their doctor. It is the combination of these components rather than any one in isolation that ensures benefits for individuals as a result of better adherence and improved self-management[4].

Asthma management in the hospital setting

Every encounter with the hospital setting represents an opportunity to optimise the person's pharmacological treatment, develop an AMP, promote self-management and establish links with appropriate follow-up care in their community.

Hospital interventions

Research in the area of asthma in hospitals has indicated that more than half of all patients miss their follow-up appointments after leaving the emergency department[5].

A risk factor for missing follow-up appointments was being given a telephone number to call instead of leaving the emergency department with a scheduled appointment. Dissatisfaction with discharge instructions was a predictor for the failure to fill prescriptions following an emergency department attendance. Patient follow-up is optimised by creating the most effortless pathway, through reducing the number of steps required for the patient to get an appointment[5].

Emergency department based interventions have used strategies to enhance linkages between emergency department and GPs in the community through the use of asthma education, booking appointments for patients prior to emergency department discharge, distribution of medications, and improved communication between emergency department doctors and GPs[5].

An empirical research paper investigated an intervention of a free 5-day course of oral corticosteroids, taxi vouchers for transportation to and from their local doctor and a 48-hour telephone reminder to make an appointment with their doctor. Patients who received this intervention were significantly more likely to follow-up with their GPs than control patients when contacted four weeks later[5].

Communication between the doctor and the patient should entail discussion about the chronic nature of asthma, the need for daily therapy, the role of the medications in the treatment of asthma and discussions of the side effects of therapy. This discussion should also determine physical, psychological or financial obstacles that may interfere with adherence.

Doctor-patient relationship and use of clinical guidelines

In a Melbourne study, it was found that one third of all attendances in the emergency department did not warrant the visit on the basis of disease severity[5]. Re-attendance was associated with poor asthma knowledge, barriers to appropriate use of medication (financial barriers to taking recommended medication), inadequate access to specialist physicians and disenchantment with doctors.

There are few trials that have examined the adherence of doctors to clinical guidelines. One study that did investigate this advocated the development of AMPs with patients and their families; interactive physician education programs to improve guideline implementation and teaching doctors better communication skills.

Conclusions

Currently there is not enough evidence to suggest one model of asthma care as superior to another in producing positive outcomes for people with asthma. Further, the literature does not consider the service needs for high-risk populations such as persons with poor socio-economic circumstances who possibly require an organisation of care with greater intensity (such as case management) to facilitate optimal self-management.

HARP will continue to target secondary and tertiary prevention strategies to better manage asthma. The evidence will be monitored as it becomes available and interventions will be explored through projects using an action research methodology. Currently HARP funds three projects targeting asthma. They are outlined on the following page.

HARP initiatives focusing on asthma

Northern Division of General Practice: Asthma Best Practice Model

This project targets people who present at the Northern Hospital emergency department with asthma. An asthma educator follows up the person focusing on promoting self management, the development or adherence to AMPs, coordination of their care through GPs utilising the "3+ visit" plan and appropriate use of asthma medications. Initial qualitative data indicates that patients are very satisfied with the education package, demonstration of medication devices, measurement of lung function, and initiation of the written asthma plan.

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Western Health Chronic Disease Management Program

A stream within this program focuses on paediatric asthma. It targets people under the age of 18 who frequently attend either Sunshine or Western Hospital emergency departments. A care coordinator is appointed to ensure care is provided across the service continuum including ensuring continuity of service across the hospital-community interface.

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Dianella Community Health Service Community Asthma Project–CAP

The project aims to improve health outcomes for the children and teenagers with asthma and their families. The specific objectives of the project are to improve the health outcomes for children with asthma presenting at the emergency department of the Royal Children's Hospital and within the project catchment area. To develop a collaborative program that offers best practice, education and support to enhance both the service provider and community knowledge of asthma management. To develop a model of care that is transferable to other catchment areas and other chronic illnesses.

Improved health outcomes will be achieved through:

- Delivery of culturally and linguistically appropriate asthma education/ management and support program to children & their families;
- Improve self management and control of asthma;
- Facilitation of broader social support and linkages with other Community Service Organisations identified, as appropriate;
- Support for GPs to better manage the treatment of children with moderate to severe asthma;
- Optimal communication and collaboration with GPs enhancing coordination of care through care planning and asthma 3+ visit plan; and
- Development of individualised asthma action plans in consultation with all relevant parties and translation of information into the appropriate language.

The project accepts referrals from the Royal Children's Hospital, GP and self-referrals from the two catchments and has been developed collaboratively through a consortium of organisations.

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Other departmental initiatives focusing on asthma

- The Primary & Community Health Branch fund primary prevention strategies targeting asthma. For further details contact: Adele Hamlyn, 9616 6150, adele.hamlyn@dhs.vic.gov.au
- The Public Health Branch through the Asthma Expert Advisory Group are developing evidence based priorities for the delivery of effective, efficient and appropriate asthma services. For further details contact: Dianne Reidlinger, 9637 4016, dianne.reidlinger@dhs.vic.gov.au

Commonwealth initiatives focusing on asthma

The Asthma 3+ Visit Plan is a Commonwealth of Australia initiative that has been implemented Australia wide. The 3+ Visit Plan involves 3–4 asthma dedicated visits of a patient to their GP with the aim of systematic assessment of severity, review of medications, appropriate asthma education, and facilitation of patient self-management. More information on this can be found at:

http://www.health.gov.au/pq/asthma/3visitpln.htm

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