

OVERVIEW OF ASTHMA CARE IN SINGAPORE

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The burden of illness

Asthma is a major chronic health problem in Singapore. On average, it afflicts one in 5 children and one in 20 adults. Patients with asthma in Singapore suffer a high disease burden in terms of health care needs, personal disability, risk of premature death and economic costs. A recent population based survey of asthmatics in Singapore found that 31% needed treatment for acute attacks per year, 45% of adults and 23% of kids missed either work or school per year, 47% were limited in their recreational activities and 30% disturbed in their sleep. In Singapore, 34% of patients with asthma have persistent disease as defined by current symptoms. However, even though clinical practice guidelines recommend preventive treatment for ALL patients with persistent asthma, less than 15% of these patients were actually taking long term preventive medication in Singapore. Thus, the severity of asthma is widely under estimated by both patients and doctors. As a result, it is under treated, especially with regards to appropriate preventive medication.

The asthma paradox

We have good evidence that for the vast majority of patients, the appropriate management of asthma can be undertaken at the primary care level and be cost effective in reducing the burden of disease. For example, a study of a cohort of 96, 258 asthmatic patients in the UK GP database from 1994 to 1998 showed that the adjusted risk ratio of asthma deaths could be reduced from 52 in patients who only take quick relieve medications to 0.4 in patients who also take daily inhaled corticosteroids. This is a massive reduction of mortality risks and confirms similar results from a Canadian study reported in 2000. Yet asthmatics in Singapore are, in general, poorly managed and suffer the burden of chronic relapsing illness and risk of sudden death.

The Singapore National Asthma Program

Thus, in mid-2001, the Ministry of Health embarked on the Singapore National Asthma Program (SNAP) to reduce the burden of disease. The SNAP has implemented a series of evidence-based and cost-effective interventional steps to promote better long-term preventive care for asthma. The activities of the SNAP in its first year are summarized in Table 1. In this second year of the SNAP, we have initiated

an Action Against Asthma project which engages all relevant advocates of asthma care in Singapore to more actively and aggressively promote better asthma preventive care in the community. By contrast with the SNAP activities in its first year, this project is directed at patients and doctors in the community and is summarized in Table 2.

The barriers to overcome

The severity of asthma is almost always under estimated by patients and thus under detected by their doctors. This is especially the case in the community/primary care area where patient load is heavy and doctor hopping/shopping is common. As a result, a very large number of patients continue to needlessly suffer from recurrent/persistent asthma symptoms, poor quality of life, incur the costs of treating severe attacks, and the risk of severe and potentially fatal attacks. A large proportion of asthma deaths that we see have been apparently "mild" cases in the community. This is a real pity because we now know that preventive treatment for asthma can be very effective in saving lives and yet is simple, safe and relatively cheap. We have the means and the methods to make things much better for our patients. Use

Table 1

SNAP in the 1st year

1. Coordinated media effort
2. New patient educational material to promote preventive treatment and personal skills
3. New clinical practice guideline for the primary care doctor to overcome barriers to best care
4. Implemented a quality improvement plan in polyclinics which improved preventer/reliever drug prescription ratios
5. Enrolled 2, 030 high-risk patients into a structured educational, drug optimization, subvented and close patient follow-up program in all government restructured hospitals.

Table 2

SNAP in the 2nd year: Action Against Asthma project

1. Media reports on better asthma care, haze and deaths.
2. Public forums, exhibitions, plays and talks on asthma
3. Singapore Thoracic and Pediatric Societies asthma roadshows to GPs
4. Core CME on asthma from College of GPs and Family Physicians (c2003)
5. School Asthma Program with School Health Services (c2003).

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the *asthma check list* described in the MOH CPG 1/2002, Chapter 7 "At the clinic visit", pages 23-26⁴ (Table 3).

Table 3

Asthma Checklist at each Clinic Visit

1. Day time symptoms (need for quick relief drug per week)
2. Night time symptoms (need for quick relief drug per 2 weeks)
3. Days off work/play (per month)
4. Acute asthma attacks (between visits)
5. Check inhaler technique (with preventer drug)
6. Compliance (daily) with preventer drug
7. Check follow up date
8. Review written asthma action plan.

Adapted from Chapter 7 of the MOH CPG for the management of asthma, 01/2002.⁴

The role of GPs

GPs manage over 80% of patients with asthma in Singapore. So they are most important protagonists in this fight against asthma. If GPs can get their patients with persistent asthma to consistently switch over from taking intermittent quick relief medication to regular /daily preventive treatment, this will make a major impact on the global burden of disease in Singapore. (*persistent asthma* = once or more times per week daytime or once or more times in 2 weeks night time self use of quick relief medication are indications for long term preventive treatment). In some Scandinavian countries, successful national programs based in the community have made asthma a much milder disease overall with asthma deaths a true rarity. This strategy will also keep the long-term care of the disease predominantly in the hands of family doctors & GPs.