

# A qualitative study of action plans for asthma

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## Abstract

**Objectives** To investigate the perspectives of patients with asthma on the use of an action plan and the implementation of this plan during an asthma attack that culminated in a visit to an emergency department.

**Design** Qualitative study.

**Setting** Tertiary teaching hospital, suburban hospital, and rural hospital.

**Participants** 62 patients aged 18 to 69 years who presented to an emergency department with asthma over a two month period.

**Results** 29 participants described having action plans given to them by their doctors. Most patients with action plans reinterpreted their plan from the perspective of their own experiences with asthma. 33 patients did not have an action plan, the most common reason being that they had not been given one by their doctor. Some occupational groups were significantly less likely to have been given an action plan by their doctor than others. Most patients with an action plan found them useful for management of their asthma.

**Conclusions** Action plans were viewed positively by patients. Participants modified their prescribed plan according to their experience of asthma. To facilitate the implementation of a prescribed action plan, doctors need to acknowledge and include the patient's personal experience of their disease.

## Introduction

Action plans for asthma are a critical component of guidelines for asthma management promulgated in many nations.<sup>1,2</sup> The plans comprise part of the recommendations for optimum care devised by the Global Initiative in Asthma.<sup>3</sup> Meta-analysis of randomised, controlled trials shows that action plans have been associated with improved asthma outcomes when delivered in written form.<sup>4</sup> Recent evidence from a case-control study of people who had died from asthma showed that the presence of an action plan was a major protective factor against death from asthma.<sup>5</sup>

The use of action plans in Australia is declining despite strong advocacy for their use and evidence of clinical benefit.<sup>6</sup> Data from the United Kingdom show that they are unpopular with both patients and clinicians.<sup>7</sup> Current strategies to improve patient care rely on building partnerships between clinicians and patients to maximise adherence to a treatment plan.<sup>8</sup> Given that action plans have been derived predominantly from a medical rather than from a patient perspective, we investigated patients' perspectives on the plans.<sup>9</sup>

## Methods

Our study was designed to recruit patients with asthma not controlled by current treatment. All patients aged

18 to 70 who attended an emergency department for asthma over a defined two month period were sent a letter about the study. Patients who had not registered their unwillingness to participate were contacted by telephone, and an appointment was arranged for an interview.

## Interview

At the interview we collected information on personal details, respiratory health using a questionnaire adapted from the European Community Respiratory Health Survey, and knowledge of asthma with a questionnaire used to evaluate a self management programme for adults with asthma.<sup>10,11</sup> We conducted a semistructured in-depth interview exploring the patient's asthma and the decision to present to an emergency department. Patients were asked whether they had an action plan prescribed by their doctor, and we explored the use of their plan. We recorded and transcribed the interviews, and we examined the transcripts for emergent themes.

## Results

### Patient group

We identified 184 eligible patients. Sixty two participants completed the interviews, 23 (37%) from a city hospital, 29 (47%) from a suburban hospital, and 10 (16%) from a rural hospital. The table lists all potential participants.

The participants consisted of 19 men and 43 women, mean age 39 years (range 18 to 69 years). Participants were predominantly of Australian, English, or Irish descent (44; 71%). Forty one (66%) participants had been admitted to hospital with asthma in the preceding year. Nearly all participants (61; 98%) had seen a doctor for asthma, 40 (64%) within the past month. Only 4 (6%) had not seen a doctor for asthma in the previous year. Asthma severity (as measured by the peak flow as a percentage of that predicted immediately on presentation to the emergency department) was assessed for all 62 participants: 30 had severe asthma, 20 moderate asthma, and 12 mild asthma.

Study recruitment of eligible patients with asthma within a defined two month period

Status	Men	Women	Total
Participant*	19	43	62
Non-participant†	6	7	13
Non-contactable	27	38	65
Refused	15	28	43
Died	1	0	1
Not asthma‡	3	8	11
Total	71	124	195

\*Completed interview and questionnaire phases of study.

†Gave initial consent for interview but unable to agree on time.

‡Discharge diagnosis from emergency department not asthma and consequently patients excluded from study

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BMJ 2002;324:1003-5

**Box 1: Excerpts from interviews with patients with action plans**

**Modified plan according to asthma experiences**

Interviewer: What about an asthma action plan? Have you ever had an asthma action plan?

137: Yes, he's written one out for me ... but I sort of felt that what he put down was probably a bit drastic you know. Like I wouldn't have felt that if I blew 200 or 210 that I immediately get in the car and race to the hospital. (woman, 50s, clerical, sales, or service)

**Followed plan precisely**

141: I do have a flow meter record ... the peak flow record is the best thing I've ever done I think. Because sometimes I look at it and oh I'm on a slide. I didn't realise it ... I've got to arrest it some way, and I'll increase my dosage, what have you. (man, 60s, blue collar worker)

**Plan useful**

159: You've got to look at it on a day to day basis ... Using your peak flow meter obviously is one way to gauge. It's another tool that you've got to gauge your asthma and the extent it's at. (man, 20s, manager or professional)

**Patients with action plans**

Twenty nine participants had an action plan given to them by their doctor. Figure 1 outlines their use of such plans. Analysis showed several themes (box 1).

*Not confident in using action plan*

Some patients, although possessing a plan, did not express confidence in its use. In this group the action plan was provided after the index presentation, and the diagnosis of asthma was recent, although scores for knowledge of asthma did not differ from the other patients with action plans.

"No I haven't thought to use it [a peak flow meter] because it's probably a little bit of a problem with the perception. I still don't perceive myself as asthmatic." (woman, 50s, retired)

*Action plan not used*

Several patients had an action plan that they did not use owing to non-recognition of asthma symptoms. Lack of body awareness influenced confidence in interpreting the onset of an attack and hence in determining when to put the action plan into use.

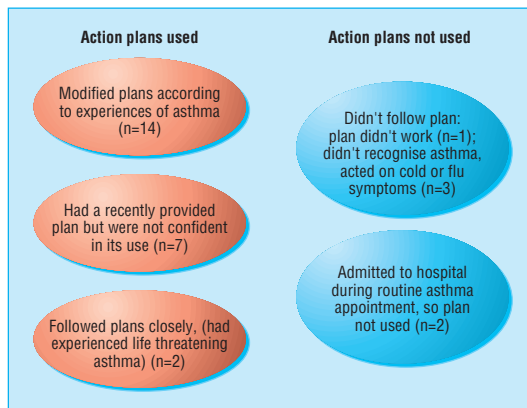


Fig 1 Patients with action plan for asthma

**Box 2: Excerpts from interviews with patients without action plans**

**Had their own plan of action**

190: Well I first go on the pump and if that doesn't work we ring the hospital, get information ... and if they say, well I go back on the pump. If that doesn't work we call an ambulance. (woman, 30s, home duties)

**Doctor hasn't suggested a plan**

Interviewer: Has your doctor talked to you about an asthma action plan?

173: No. The trouble is up in the valley you've got a constant flow of doctors that come and then they're gone again. You've got incoming new doctors all the time and up here you tend to, I don't know. You get a lot of good doctors that come from overseas and then they're up here for a while and then they're gone to Melbourne. You've got these, the flocks of doctors is never good up here. It's very hard to get ... There's no kind of like a family type atmosphere with doctors up here because they don't stay long enough. (woman 40s, unemployed)

"I had the flu a couple of days ago and I was getting 300 with my peak flow, and they said go to hospital if you're 350, and I didn't think it was necessary. I think it was just a lot of mucus coming up. So it wasn't relevant to me." (man, 18, student (clerical, sales, or service))

**Patients without action plans**

Thirty three patients did not have an action plan from their doctor (fig 2 and box 2).

*Plan of action*

Many of these patients had a "plan of action" for their asthma. Many of these plans were medically credible. Other patients derived a plan independently from medical advice through personal understanding of body awareness or alternative remedies. One of these patients objected to a plan prescribed by his doctor and had formulated his own:

"I know when I've got my low point, I've got my medium point and I've got my major point ... It's something I know personally myself." (man, 50s, blue collar worker)

*No plan of action*

Several other patients thought that an action plan was not suitable for them because of lack of clarity about a

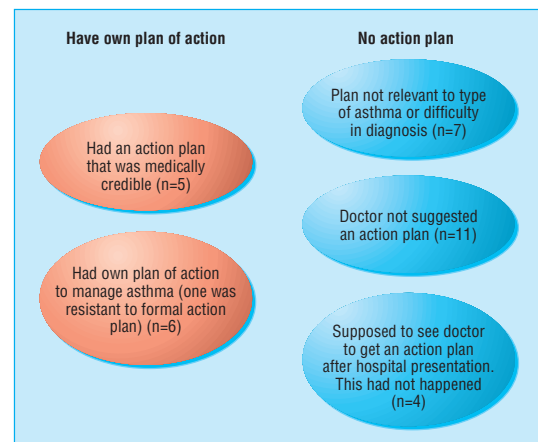


Fig 2 Patients without action plan for asthma

diagnosis of asthma, such as an alternative diagnosis of emphysema.

### Doctors not providing action plans

The most common reason for not having an action plan, offered by 15 patients, was that the doctor had not given them one. Correlation of occupational groups with provision of an action plan showed that plans were much more common among those engaged in home duties and clerical workers than other occupational groups.

#### Overall attitudes to action plans

Most patients with knowledge of action plans viewed them favourably. Most of the patients with an action plan prescribed by a doctor used it in the management of their asthma, and others had devised a plan of action. Other patients who did not have an action plan thought it would be useful if they did.

## Discussion

The views of patients with asthma have not been widely heard in the development of guidelines for the management of asthma. We found that action plans for asthma were considered useful or desirable by many patients with the disease, and that even when patients denied the existence of an action plan, they often constructed their own plan of action. Patients who were confident in the use of their action plan reinterpreted even categorical statements such as peak flow readings from the perspective of their own experience of their illness. Moreover, interpretation of a plan from the perspective of experience of personal disease was vital to its implementation.

Our study shows that not all patients with an action plan used it, and that scores for knowledge of asthma did not differ between those who had an action plan and those who were not confident to use it. This observation provides an explanation for previous findings that asthma education alone in the absence of an action plan and regular medical review is insufficient to improve patient outcomes.<sup>12</sup>

In our study the most common reason for not having an action plan was simply that the patient had not been given one by his or her doctor. Some of these patients thought an action plan would be useful if they had one. That some occupational groups were less likely to have an action plan shows that doctors perceive barriers to the implementation of such a plan. Such perceptions may partly be determined by the social interaction occurring during the consultation. Better understanding of the influences on the prescription of action plans by doctors is clearly integral to increasing the ownership of plans by patients.

Intuitively, clinicians might expect action plans to be modified or adapted by patients, but our study is the first to show this. Prescribed action plans were interpreted and implemented by patients from the perspective of their experience of asthma. The importance of a partnership between doctor and patient has been emphasised in the construction of management plans for chronic illness.<sup>13</sup> Paradoxically, provision of an action plan prescribed by a doctor is not, in itself, an act of partnership. We show that an iterative process

### What is already known on this topic

Action plans for the self management of asthma are standard and have been shown to improve patient outcomes and to protect against death from asthma when provided in written form

Factors that enable patients with asthma to implement an action plan and their perspectives on the use of such plans have not been explored in an individual context

### What this study adds

Most patients with action plans found them useful

Most patients modified their plans according to their perceptions of severity and likely disease outcome

Clinicians must engage with a patient's experience of asthma to facilitate the use of an action plan

encompassing experience of disease would enhance the use of an action plan. Indeed the modification of an action plan was integral to its ownership and use. Doctors should expect patients to modify their action plans and should inquire in ongoing consultations how this has been done.

We thank the Consumer Reference Group, Robin Ould from Asthma Victoria, and the emergency department and medical records staff who facilitated recruitment for this study, particularly Mark Fitzgerald, Andrew McLean, David Pickersgill, and Craig Winter.

Contributors: See [bmj.com](http://bmj.com)

Funding: Co-operative Research Centre for Asthma.

Competing interests: None declared.

- 1 National Asthma Council Australia. *Asthma management handbook 2002*. South Melbourne: NACA, 2002.
- 2 British Thoracic Society, British Guidelines on Asthma Management. *Thorax* 1997;52 (suppl 1):1-21S.
- 3 Global Initiative for Asthma. *Asthma management and prevention: a practical guide for public health officials and health care professionals*. Imperial College, London: GINA, 2001.
- 4 Gibson PG, Coughlan J, Wilson AJ, Abramson M, Bauman A, Hensley MJ, et al. Self-management education and regular practitioner review for adults with asthma. *Cochrane Library*. Issue 2. Oxford: Update Software, 2000.
- 5 Abramson M, Bailey M, Couper F, Driver J, Drummer OH, Forbes A, et al. Are asthma medications and management related to deaths from asthma? *Am J Respir Crit Care Med* 2001;163:12-8.
- 6 Ruffin R, Wilson D, Smith B, Southcott A, Adams R. Prevalence, morbidity and management of adult asthma in South Australia. *Immunol Cell Biol* 2001;79:191-4.
- 7 Jones A, Pill R, Adams S. Qualitative study of views of health professionals and patients on guided self management plans for asthma. *BMJ* 2000;321:1507-10.
- 8 Donovan J, Blake D. Patient non-compliance: deviance or reasoned decision-making? *Soc Sci Med* 1992;34(5):507-13.
- 9 Beasley R, Cuchley M, Holgate S. A self management plan in the treatment of adult asthma. *Thorax* 1989;44:200-4.
- 10 Burney P, Luczynska C, Chinn S, Jarvis D. The European Community Respiratory Health Survey. *Eur Respir J* 1994;7:954-60.
- 11 Allen RM, Jones MP. The validity and reliability of an asthma knowledge questionnaire used in the evaluation of a group asthma education self-management program for adults with asthma. *J Asthma* 1998;35(7):537-45.
- 12 Gibson PG, Coughlan J, Wilson A, Hensley M, Abramson M, Bauman A, et al. The effects of limited (information only) asthma education on health outcomes of adults with asthma. Airways module of the Cochrane Database of Systematic Reviews, ed C Cates, et al. *Cochrane Library*. Issue 1. Oxford: Update software, 1998.
- 13 Clark N, Gong M. Management of chronic disease by practitioners and patients: are we teaching the wrong things? *BMJ* 2000;320:572-5.

(Accepted 22 November 2001)