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Influences on hospital admission for asthma in south Asian and white adults: qualitative interview study

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Abstract

Objective To explore reasons for increased risk of hospital admission among south Asian patients with asthma.

Design Qualitative interview study using modified critical incident technique and framework analysis.

Setting Newham, east London, a deprived area with a large mixed south Asian population.

Participants 58 south Asian and white adults with asthma (49 admitted to hospital with asthma, 9 not admitted); 17 general practitioners; 5 accident and emergency doctors; 2 out of hours general practitioners; 1 asthma specialist nurse.

Main outcome measures Patients' and health professionals' views on influences on admission, events leading to admission, general practices' organisation and asthma strategies, doctor-patient relationship, and cultural attitudes to asthma.

Results South Asian and white patients admitted to hospital coped differently with asthma. South Asians described less confidence in controlling their asthma, were unfamiliar with the concept of preventive medication, and often expressed less confidence in their general practitioner. South Asians managed asthma exacerbations with family advocacy, without systematic changes in prophylaxis, and without systemic corticosteroids. Patients describing difficulty accessing primary care during asthma exacerbations were registered with practices with weak strategies for

asthma care and were often south Asian. Patients with easy access described care suggesting partnerships with their general practitioner, had better confidence to control asthma, and were registered with practices with well developed asthma strategies that included policies for avoiding hospital admission.

Conclusions The different ways of coping with asthma exacerbations and accessing care may partly explain the increased risk of hospital admission in south Asian patients. Interventions that increase confidence to control asthma, confidence in the general practitioner, understanding of preventive treatment, and use of systemic corticosteroids in exacerbations may reduce hospital admissions. Development of more sophisticated asthma strategies by practices with better access and partnerships with patients may also achieve this.

Introduction

Black and south Asian people are at increased risk of hospital admission with asthma.¹⁻⁷ No consistent differences in severity or prevalence of asthma, prescribed drugs, or asthma education have been described.^{1-4,8} In one study south Asian patients were less likely to report adherence to their drug regimen or self management behaviour.¹ Interventions to reduce admission rates in black and Asian groups have met with variable success.⁹⁻¹¹

Box 1: Details of 58 south Asian and white patients interviewed**Age**

- Mean 45 years (range 17-72)

Sex

- 39 women, 19 men

Ethnicity (allocated by researcher during interviews)

- 24 south Asian—9 Pakistani Muslims, 5 Punjabi Sikhs, 3 Gujarati Muslims, 1 Indian Muslim, 2 Punjabi Hindus, 1 Gujarati Hindu, 1 Sri Lankan Hindu, 1 Bangladeshi Hindu, 1 Kerala Hindu
- 34 white

Medication (British Thoracic Society (BTS) step¹³)

- Step 1 (2 patients), steps 2-3 (38), step 4 (14), step 5 (4)

Differences in hospital admission rates for asthma between ethnic groups might be because of differences in beliefs or behaviour during exacerbations or in access to or delivery of care. Our aim was to explore these factors in south Asian and white adults admitted to hospital with asthma.

Participants and methods

The study setting was Newham, east London, a highly deprived area with a large (30%) mixed south Asian population (Indian, Pakistani, and Bangladeshi).¹² The local research ethics committee approved the study.

Participants

Patients admitted with asthma—We recruited 49 south Asian and white adults admitted with acute asthma to Newham General Hospital (see box 1 for details). Recruitment was, as far as possible, consecutive.¹⁴ As recruitment proceeded, we reviewed the sample to ensure maximum diversity of experience in terms of age, ethnicity, religion, duration and management of asthma attack, and route of hospital admission.

Patients not admitted to hospital—Since the patients admitted to hospital might be atypical in terms of their asthma management, we compared their experiences with those of a limited number of patients with severe asthma (British Thoracic Society (BTS) step ≥ 3 ¹³) but who had avoided admission.

General practitioners—Initially we interviewed a maximum variety sample¹⁴ of patients' general practitioners from practices with high and low admission rates for asthma, from singlehanded and group practices and from practices where patients described particularly good or poor relationships with their doctors. In total, we interviewed 17 general practitioners.

Hospital clinical staff and out of hours primary care services—We identified hospital and out of hours factors that might influence admission by interviewing five doctors from Newham accident and emergency department, the hospital asthma specialist nurse, and two doctors working for the local Healthcall organisation.

Interviews

With their informed consent, GK interviewed patients in their chosen language, usually on hospital wards.

Interviews were taped, translated where necessary, and transcribed verbatim. CG interviewed the general practitioners.

Data analysis

We modified the critical incident technique,^{15 16} allowing analysis of interplay of identified factors. A multidisciplinary team (sociologist, anthropologist, and primary and secondary care doctors) met regularly to analyse data. Two researchers coded interviews independently before entry on a database.

Results

We identified 60 influences on hospital admission, illustrating the complexity of participants' experience (see full version on bmj.com). Patients' statements about cognition, education, and behaviour were striking for their strength or consistency across and within interviews.

Personal influences

As well as citing causes such as infections and pollution, many patients described adverse social circumstances and reckoned that stress was a cause of attacks.

Confidence to control asthma differed between the two patient groups. Many south Asian patients talked in passive terms about controlling asthma and dealing with attacks—"What do you do to control your asthma? Nothing really. Just salbutamol isn't it" (34 year old Bangladeshi Hindu man)—with relatives managing attacks on a patient's behalf or acting as mediators. Some statements by south Asian patients seemed resigned, suggesting a particular attitude to illness in general and their response to it. Many white patients seemed more personally proactive and spoke of control in the first person (box 2).

Poor understanding of the roles of asthma drugs occurred in both groups but was widespread among the south Asian patients—"Pumps, there are so many different ones—blue, brown, green—I put the machine on as well. I don't know what is happening" (60 year old Punjabi Hindu woman). In particular, the concept of preventive medication was described by only one south Asian patient but was familiar to white informants. Although references to formal management plans were rare, white patients frequently described increasing the use of a corticosteroid inhaler during an attack; this was absent from south Asians' accounts. Sole use of reliever inhalers or nebulisers or non-specific use of many inhalers was described by some white patients but by all the south Asians interviewed.

The concept of using systemic corticosteroids to abort an exacerbation was mentioned by only one south Asian man (his general practitioner declined his request) but was common among the white patients interviewed.

Patients often held extreme views of their general practitioners. Although patients from both ethnic groups had experience of doctors they felt were inadequate—"He's a bitch. He's useless. He's too busy, he says. He works two hours in the morning and two hours in the evening surgery" (60 year old white woman (b))—overall there were qualitative differences in relationships with general practitioners. Some white informants said how long they had been registered

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with the same doctor and that they were on first name terms—"He knows me so well" (55 year old white woman). They valued continuity and personal care. This familiarity was not evident in the accounts of south Asian patients, whose statements were less personal—"He is neither good nor bad. He is 50:50" (45 year old Pakistani Muslim man)—and more functional—for example, that their general practitioner spoke the same language, would visit if necessary, or might telephone to check they were well.

Although there were some similarities in lifestyle and use of complementary asthma treatment by patients (such as relaxation techniques, homoeopathy, Chinese herbalism, home acupuncture kits), there were important differences. Some south Asians used traditional medicines or dietary changes consistent with Islamic or ayurvedic humoral systems, particularly

hot food spices such as ginger or turmeric, reflecting a view that cold foods were a cause of asthma. These were used in addition to, and rarely instead of, Western drugs. By contrast, white patients mentioned self help (helplines, videos, and books), lifestyle changes (stopping smoking, avoiding passive smoking, exercise, recreation, taking vitamins), and peak expiratory flow monitoring.

Patients with severe asthma who had not been admitted to hospital

Both white and south Asian patients who had avoided admission talked confidently about controlling asthma, understood the concept of preventive medication, and trusted their general practitioner or the local asthma specialist nurse. Support from relatives generated control and confidence, rather than simply having someone to mediate. Most patients had confidence to experiment with self care. The medical model of self management was common.

Health professional influences

General practitioners' attitudes towards self management and systemic corticosteroids

Self management plans were seen by general practitioners as impractical, the level of understanding required being beyond most patients. Many were wary of using systemic corticosteroids—"I don't use courses of steroids, for the simple reason ... I just leave them to the hospital" (general practitioner of 57 year old Gujarati Muslim woman)—let alone allowing patients the responsibility to use them at home.

Views of accident and emergency doctors

Accident and emergency doctors asserted that patients were admitted on the basis of clinical severity alone—"Well, I don't know much about people's backgrounds when they come in. I haven't got a lot of time to get into their social history ... My two biggest [criteria] are pulse and respiratory rate" (accident and emergency senior house officer).

Access to primary care during asthma attacks

Easy access to primary care

Patients gaining easy access to primary care during exacerbations described good relationships with their general practitioners. White patients predominated in this group; they had confidence to control asthma and were proactive, negotiating contact with primary care themselves and rarely involving relatives. The urge to contact their general practitioner (rather than go straight to hospital) was reinforced by previous experience—"I prefer going to my GP ... you know because he wants to see me" (20 year old white woman).

General practitioners described well developed and sometimes elaborate strategies for asthma care and gave examples showing why they saw asthma as a priority. Admission avoidance policies were common, including targeting high risk patients, offering "privileged access," and providing out of hours continuity of care. These policies were reflected in the partnerships doctors developed with patients, sometimes over years, in which they encouraged and worked with patients to improve control—"Well I have known her, in my list, since 1982. [I] look at all the histories, I made a note: 'Father is asthmatic, child as an infant had eczema' ... I

Box 2: Personal influences on asthma control among south Asian and white patients

Controlling asthma and coping with exacerbations

"I can't do anything on my own will."

What do you do to control [your asthma]? "I go to my daughter's."

What does your GP say about your illness? "He says, 'I will treat, have faith in God.'"

49 year old Punjabi Hindu woman

When you get an asthma attack what do you do? "I don't do anything, I come here ... You telephone, and the ambulance comes."

60 year old Punjabi Hindu woman

"I had a bad attack, probably three years ago, and then I stopped smoking and I've completely changed my life around. But since then I've managed my asthma better than I ever have done, you know?"

32 year old white man

Concept of asthma prevention medication

What do you do to control it? "Ventolin."

Do you use any other one? "I have the brown but I only use the blue one."

How long have you had the brown one? "I don't have the date—two or three years."

Do you know what the two medicines do? "That one [brown] you don't have an attack the doctor told me."

40 year old Pakistani Muslim woman

"Half of these medicines they give you here for asthma, you've got to take them on a regular basis ... Becotide, now that's a preventative ... you're supposed to use that all the time, you can't just use that and think, 'I've got an attack coming on, I'd better use it.' It's too late ... take like an 'eadache, where you think, 'I'll take a tablet for me 'eadache and it'll get rid of it.' With asthma, I think asthma's an illness on its own, you've got to keep your airwaves [airways] open all the time"

58 year old white man

Concept of systemic corticosteroids in asthma exacerbations

"I took a big dose of steroids because that is how I have been told to handle it."

45 year old white woman

"Cortisone or something, that is one wonderful thing. That is something out of this world because within 20 minutes you think, 'cor that's good stuff, I can breathe again.'"

58 year old white man

Confidence in general practitioners

"He's brilliant. He's got an asthma nurse, he's got a diabetic clinic ... he knows all my history ... He seems to have more time because he knows you better."

60 year old white woman (a)

"When the medicine I need I go there, and if I have a big problem I go there, but my GP doesn't help much, he doesn't help me in many things now."

60 year old Kerala Hindu man

made a diagnosis of bronchial asthma" (general practitioner of 20 year old white woman).

"When I started with him, giving up [smoking] was the major issue." (Interviewer) How would you describe your relationship with this chap? "I sponsored him [to run a marathon] ... I'd say I have a fairly good relationship with him" (general practitioner of 32 year old white man).

Difficult access to primary care

Patients describing difficult access to primary care during asthma attacks were registered with practices with high admission rates for asthma (median admission rate 55th of 67 Newham practices, compared with 14th for easy access group). Most such patients were south Asian. Difficulties included the doctor declining to visit, telling the patient to arrange admission themselves, or giving telephone advice or a prescription in place of a face to face consultation, and a receptionist preventing patients speaking to their doctor. Family members (including children) either mediated contact with the general practitioner or were consulted as an alternative. General practitioners described basic asthma strategies, with regular review as a basic aim, but without prioritising asthma, targeting high risk patients, or referring to partnerships of care. A lack of nursing support for some practices led to a sense of desperation—"Our practice nurse has gone. I can only do [anything] when they come and sit in front of me—if they come. If they don't come I'm helpless" (general practitioner of 57 year old Gujarati Muslim woman)

Direct self referral to hospital

Patients in this group had exacerbations of more sudden onset (median duration of attacks before admission 2.5 days, with many admitted within 24 hours, compared with 7 and 14 days respectively for groups with easy and difficult access to primary care). White and south Asian patients called ambulances to get immediate care. Many had previous admissions and considered hospital to be the best place to be—"You get full attention once you come in [to hospital] with the breathing. You know you don't wait about anywhere. You're in—boomf—and you're sorted. It's wonderful." (65 year old white man)—and some had experience of poor access to primary care.

Discussion

This study takes a patient orientated rather than biomedical approach to understanding hospital admission for asthma. In comparing two ethnic groups we do not cast the behaviour of the white patients as normative. Indeed, few patients typified the medical model of asthma self management. We are aware of dangers of stereotyping behaviour in ethnic groups, as well as problems in aggregating groups into classifications that may obscure cultural differences. None the less, distinctions emerged in accounts of south Asian and white patients that are consistent with other work¹⁷ and which could explain differences in risk of admission.

The patients (frequently white) with confidence to manage exacerbations had good access to general practitioners with well developed practice strategies for managing asthma. These strategies emphasised poli-

cies to avoid admission, targeting of high risk patients, and a supportive approach. Good access to primary care is associated with reduced risk of hospital admission.¹⁸ Our findings are consistent with those of Clarke et al, who reported that a behavioural intervention for doctors that promoted a partnership style of consulting increased patients' confidence and reduced their use of health services.¹⁹ Developing partnerships with doctors that lead to better asthma control might be more difficult for some south Asian patients, either because doctors' espousal of Western medical concepts (such as use of regular prophylaxis) may impede a partnership relationship or because the partnership model itself may conflict with beliefs about what is an appropriate doctor-patient relationship.

The south Asian patients admitted to hospital in this study were often less confident, even resigned, about controlling asthma than the white patients. This could reflect either an intrinsic cultural characteristic or the difficulties of coping with asthma in deprived social circumstances where racism is common and health services are often inadequate and inappropriate. Two observations support the latter view. Firstly, south Asian patients occasionally contrasted their poor asthma control in Britain with better control in India or Pakistan. Secondly, the south Asians and white patients we interviewed who had not been admitted showed similar confidence to control asthma and to experiment with new approaches.

Understanding and use of asthma drugs

That south Asian (and some white) patients seemed unaware of the roles and benefits of systemic corticosteroids and preventive treatment in exacerbations clearly made admission to hospital more likely. Moudgil et al reported that an educational intervention provided by a south Asian respiratory specialist reduced use of healthcare services for asthma in white but not south Asian patients,¹¹ suggesting differences in how the same information is understood and acted on. Further work should determine how cultural barriers between patient and clinician hinder education.

Other factors

Although our sample was small, our study suggests some factors may be less important than previously thought. Firstly, language problems were rarely cited. Difficulties of access probably relate to a range of factors including organisation and attitudes within primary care as well as power issues between general practitioners, staff, and patients in areas such as race, class, religion, and sex. Secondly, singlehanded practices were capable of sophisticated asthma care, provided they were adequately resourced. Thirdly, south Asian patients referred themselves to hospital with similar reasons and frequency as white patients. Fourthly, use of traditional medication by south Asian patients was by no means ubiquitous and rarely to the exclusion of Western drugs. Fifthly, we found no evidence of an "ethnicity filter" at the accident and emergency department that might increase the likelihood of admission for south Asians. Sixthly, we found no difference in socioeconomic status that might explain differences between our two groups. Seventhly, we did not detect a gradient in control and confidence reflecting first to third generational status of south

What is already known on this topic

South Asian patients with asthma are at increased risk of hospital admission with asthma compared with white patients

No consistent differences in severity or prevalence of asthma, prescribed drugs, or asthma education have been described, and interventions to reduce admission rates in Asian patients have met with variable success

What this study adds

Compared with white patients, south Asian patients admitted to hospital with asthma had less confidence to control asthma, were unfamiliar with the concept of preventive medication, and had less confidence in their general practitioners

South Asian patients managed asthma attacks through family advocacy and without systematic changes in prophylaxis and without systemic corticosteroids

Patients reporting difficulty in accessing primary care during attacks were often south Asian

Asians. Finally, we found no evidence of variations in behaviour between south Asian groups.

Conclusions

General practices with south Asian patients may benefit from interventions that encourage the development of sophisticated asthma strategies including admission avoidance policies and partnership styles of consultation. A better understanding of the meaning of asthma in south Asian groups should contribute to educational interventions that promote the concepts of preventive treatment, self care, and the benefit of systemic corticosteroids.

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