

What is already known on this topic

Clinical specialist nurse outreach to primary care has not been shown to improve patient outcomes

Education of hospital attenders with acute asthma by asthma specialist nurses has inconsistent effects on unscheduled care

People with asthma from ethnic minority groups experience high levels of morbidity

What this study adds

When asthma specialist nurses educated patients and liaised with primary care clinicians, unscheduled care in a deprived multiethnic area was reduced

Ethnic groups may not benefit equally from specialist nurse intervention

Ethnicity

Our study was not powered to detect differences in effect of the intervention between ethnic groups, but our exploratory findings are compatible with potentially important differences in outcome between ethnic groups. This is consistent with other work suggesting that minority ethnic groups derive less benefit than majority groups from asthma education.⁷ No randomised studies of interventions specifically addressing ethnic minority groups have reduced unscheduled asthma care.^{7 21} These observations are important because interventions that have a differential benefit between majority and minority ethnic groups potentially widen inequalities in health.

We thank the National Asthma Campaign for funding; the participants; Mark Levy for advice on study design; Yvonne Carter, Allen Hutchinson, Keith Meadows, Jeanette Naish, Peter Stables, Ayesha Khanem, Enid Hennessey, Pat Sturdy, Sarah Cotter, Monica Fletcher, and members of the department of general practice for comments and help.

Contributors: See bmj.com

Funding: National Asthma Campaign.

Competing interests: None declared.

Ethical approval: The study was approved by the local research ethics committee.

- Hobbs R, Murray ET. Specialist liaison nurses. *BMJ* 1999;318:683.
- Ehrlich RI, Bourne DE. Asthma deaths among coloured and white South Africans: 1962 to 1988. *Respir Med* 1994;88:195-202.
- Ng TP, Tan WC. Temporal trends and ethnic variations in asthma mortality in Singapore, 1976-1995. *Thorax* 1999;54:990-4.
- Ormerod LP. Adult Asian acute asthma admissions reassessed: Blackburn 1991-1992. *Respir Med* 1995;89:415-7.
- Gilthorpe MS, Lay-Yee R, Wilson RC, Walters S, Griffiths RK, Bedi R. Variations in hospitalization rates for asthma among black and minority ethnic communities. *Respir Med* 1998;92:642-8.
- Griffiths C, Kaur G, Gantley M, Feder G, Hillier S, Goddard J, et al. Influences on hospital admission for asthma in south Asian and white adults: qualitative interview study. *BMJ* 2001;323:962.
- Moudgil H, Marshall T, Honeybourne D. Asthma education and quality of life in the community: a randomised controlled study to evaluate the impact on white European and Indian subcontinent ethnic groups from socioeconomically deprived areas in Birmingham, UK. *Thorax* 2000;55:177-83.
- Thomson O'Brien MA, Oxman AD, Davis DA, Haynes RB, Freemantle N, Harvey EL. Educational outreach visits: effects on professional practice and health care outcomes (Cochrane Review). In: *Cochrane Library*, Issue 4. Chichester: John Wiley, 2003.
- Levy ML, Robb M, Allen J, Doherty C, Bland JM, Winter RJ. A randomized controlled evaluation of specialist nurse education following accident and emergency department attendance for acute asthma. *Respir Med* 2000;94:900-8.
- EuroQol Group. EuroQol: a new facility for measurement of health related quality of life. *Health Policy* 1990;16:199-208.

- Barley EA, Quirk FH, Jones PW. Asthma health status measurement in clinical practice: validity of a new short and simple instrument. *Respir Med* 1998;92:1207-14.
- Steen N, Hutchinson A, McColl E, Eccles MP, Hewison J, Meadows KA, et al. Development of a symptom based outcome measure for asthma. *BMJ* 1994;309:1065-8.
- Feder G, Griffiths C, Highton C, Eldridge S, Spence M, Southgate L. Do clinical guidelines introduced with practice based education improve care of asthmatic and diabetic patients? A randomised controlled trial in general practices in east London. *BMJ* 1995;311:1473-8.
- Premaratne UN, Sterne JAC, Marks GB, Webb JR, Azima H, Burney PGJ. Clustered randomised trial of an intervention to improve the management of asthma: Greenwich asthma study. *BMJ* 1999;318:1251-5.
- Madge P, McColl J, Paton J. Impact of a nurse-led home management training programme in children admitted to hospital with acute asthma: a randomised controlled study. [Comment.] *Thorax* 1997;52:223-8.
- Osman LM, Calder C, Godden DJ, Friend JA, McKenzie L, Legge JS, et al. A randomised trial of self-management planning for adult patients admitted to hospital with acute asthma. *Thorax* 2002;57:869-74.
- Stevens CA, Wesseldine LJ, Couriel JM, Dyer AJ, Osman LM, Silverman M. Parental education and guided self-management of asthma and wheezing in the pre-school child: a randomised controlled trial. *Thorax* 2002;57:39-44.
- Wesseldine LJ, McCarthy P, Silverman M. Structured discharge procedure for children admitted to hospital with acute asthma: a randomised controlled trial of nursing practice. *Arch Dis Child* 1999;80:110-4.
- Griffiths C, Sturdy P, Naish J, Omar R, Dolan S, Feder G. Hospital admissions for asthma in east London: associations with characteristics of local general practices, prescribing, and population. *BMJ* 1997;314:482-6.
- Jolly K, Bradley F, Sharp S, Smith H, Thompson S, Kinmonth AL, et al. Randomised controlled trial of follow up care in general practice of patients with myocardial infarction and angina: final results of the Southampton heart integrated care project (SHIP). *BMJ* 1999;318:706.
- Bonner S, Zimmerman BJ, Evans D, Irigoyen M, Resnick D, Mellins RB. An individualized intervention to improve asthma management among urban Latino and African-American families. *J Asthma* 2002;39:167-79.

(Accepted 11 November 2003)

doi 10.1136/bmj.37950.784444.EE

bmjlearning.com

Childhood asthma

Over the past 25 years the prevalence of childhood asthma has risen from 4% to 10%. The main symptoms are chronic or recurrent cough and wheeze. You can confirm the diagnosis by checking peak expiratory flow in children old enough to do this. To find out more, take our learning module on the diagnosis and treatment of childhood asthma on bmjlearning.com. After reading the module, you can test your knowledge with our "Best of many questions" quiz.

Kieran Walsh, BMJ Learning (bmjlearning@bmjgroup.com)

Corrections and clarifications

Experts predict big rise in dengue fever in South East Asia

An out of date URL slipped into the last sentence of this news article by Jane Parry (News Extra, bmj.com, 13 December 2003—www.tropnet.net is the correct URL for TropNetEurop (the European Network on Imported Infectious Disease Surveillance)).

Indirect comparison meta-analysis of aspirin therapy after coronary surgery

A few errors crept into both versions of this paper by Eric Lim and colleagues (*BMJ* 2003;327:1309-11). In the full version of the article (on bmj.com) the printed equations in the statistical methods section should be on separate lines as follows:

$$\log RR_{ML} = \log RR_{MP} - \log RR_{LP}$$

$$\text{var}(\log RR_{ML}) = \text{var}(\log RR_{MP}) + \text{var}(\log RR_{LP})$$

In the abridged version, the table still contains the errors that were corrected at proof stage in the full version (where it is table 2): the numbers of patients with events and the event rates for Lorenz (both regimens) and Sanz (aspirin regimen) and the relative risk (95% confidence interval) for Hockings should therefore read as in the full version (on bmj.com). Finally, an extraneous "2" slipped into Eric Lim's email address; eric.lim@cvsnet.org is his correct address.