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The benefits of providing GPs with the results of a Confidential Enquiry into asthma deaths

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Abstract

Aims:

Printed materials are used to change behaviour yet evidence suggests they generally have little effect. This survey investigated the impact on GPs of reports from a Confidential Enquiry into Asthma Deaths.

Methods:

A random sample of 1 in 4 general practitioners from East Anglia were sent a questionnaire, total = 306. 71% (218) completed the questionnaire.

Results:

80% (117) of those who read reports could identify risk factors for

asthma death, compared to 22% (13) of those who had not read reports. The difference (58%) was highly statistically significant, $p < 0.0001$ (95% C.I. 44% to 69%) even after adjusting for various confounding factors including interest in asthma. Furthermore, of those who had read a report, 53% stated these had altered their management of patients.

Conclusion:

The findings suggest that locally-generated mailed guidance on a specific major health issue can have an important impact on knowledge and reported clinical practice.

Introduction

Printed educational materials are frequently used to change behaviour yet evidence from systematic reviews suggests that they have little if any effect.¹

The East Anglian Confidential Enquiry into asthma deaths has been conducted since 1992, investigating 71 deaths within Cambridgeshire, Norfolk and Suffolk. This involves respiratory physicians, general practitioners, nurses and public health physicians. Reviewers for the confidential enquiry examine hospital and general practice records, and where possible visit the patient's general practitioner and their next of kin.

Detailed discussion with individual practitioners is inherent in confidential enquiries,² which may lend them particular salience. In addition, the East Anglian enquiry team produces an annual report. This has been distributed to all general practitioners in the three counties each year since 1994. These reports describe basic details about each death and each report has stressed factors characterising those at increased risk of developing severe or fatal asthma.³ This study was performed to assess the impact of these annual reports on general practitioners within Cambridgeshire, Norfolk and Suffolk.

Methods

A one in four random sample of general practitioner principals within Cambridgeshire, Norfolk and Suffolk received a questionnaire 8 months after the most recent report had been circulated (total surveyed = 306). The random sample was produced by including every fourth GP from alphabetically ordered lists provided by each health authority. GPs were surveyed between February and March 2000. Non-respondents were followed up twice and a total of 222 responses were received.

One response was blank and there were three duplicates. This left 218 questionnaires, a 71% response rate (71-72% across the three counties).

Health authorities provided demographic data concerning sex, Membership of the Royal College of General Practitioners (MRCGP) and trainer status, whilst the Medical Register provided data on years since qualification (a proxy for age).

Results

Some 142 respondents (65%) remembered the most recent report, whilst 77 respondents remembered one of the previous reports (35%). Overall, 146 respondents (67%) had read at least one report, and these had been qualified marginally longer than those who had not read a report (mean difference = 2.7 years, $p = 0.02$), see table 1.

Table 1: Background of respondents identified by GPs who either had or had not read an East Anglian Confidential Enquiry into Asthma deaths report

	Read report (n=146)	Did not read report (n=59)	Difference in proportions or means (95% C.I.)	p-value
Male	106 (73%)	44 (75%)	-2% (-14% to 12%)	0.73
Years post qualification	20.8 (s.d. =7.6)	18.1 (s.d. =7.2)	2.7years (0.4 to 5.0)	0.02
MRCGP	59 (40.5%)	24 (40.5%)	0% (-15% to 14%)	>0.99
GP Trainer	28 (19%)	7 (12%)	7% (-5% to 17%)	0.17
Special interest in asthma	71 (49%)	24 (41%)	8% (-7 to 22%)	0.29
Practice holds dedicated asthma clinic	125 (86%)	50 (85%)	1% (-9% to 13%)	0.68
Information from reports altered management	77 (53%)	2 (3%)	*	*

* Not formally compared, as those who had not read the reports would not be expected to have altered their management as a result of information from the reports
95% C.I. = 95% Confidence Interval
s.d. = standard deviation

Respondents were asked to value reports from 1 to 5 (report of no value to very valuable). Of those who had read a report, 84% gave 3 or more on this scale, and 53% stated that reports had altered their management of individual patients.

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All respondents were asked to list up to three risk factors that were identified within the reports for development of severe or fatal asthma. Some 117 (80%) of those who read the reports could identify one or more risk factors. This contrasts with only 13 (22%) of those who had not read any report. This difference in proportions (58%) was highly statistically significant, $p < 0.001$ (95% confidence interval 44% to 69%), see table 2. This remained the case after adjusting (using logistic regression) for the following: years since qualification, sex, holding MRCGP, general practitioner trainer status, holding dedicated asthma clinics, or stating an interest in asthma. The odds ratio of listing one or more risk factors for those who had read a report versus those who had not was 15.5 (95% Confidence Interval 7.0 to 34.3, $p < 0.001$). Figure 1 demonstrates the number of risk factors identified by those who had or had not read the reports.

Conclusions

Results from this study suggest that this confidential enquiry has had a significant impact upon knowledge. Almost 70% of local general practitioners had read one report and half of these stated the reports had influenced their patient management. Those who had read a report had sixteen times the odds of identifying one or more risk factors associated with severe or

Table 2: Risk factors identified by GPs who either had or had not read an East Anglian Confidential Enquiry into Asthma deaths report

Risk factors:	Read Report		Did not read report	
	n	%	n	%
One or more risk factor from following list was identified.	117	80	13	22
Psychological factors	40	27	3	5
Social factors (e.g. deprivation)	47	32	2	3
Poor compliance	54	37	3	5
Failure of follow-up	22	15	1	2
Treatment factor*	30	21	3	5
Hospital asthma admission	28	19	4	7
Emergency deterioration	17	12	4	7

Footnotes:

Difference in proportion identifying one or more risk factors was 58% (95% confidence interval 44% to 69%, p -value < 0.001) for one or more identified risk factor.

*Treatment factors include those receiving three or more asthma drugs, high dose inhaled steroids; oral steroids; nebulised treatment; or two or more bronchodilators per month.

fatal asthma than did those who had not. It is possible that these general practitioners were particularly interested in the reports because they described their own (or colleagues) patients. It is also possible that those who had not read any reports felt discouraged from guessing risk factors. Nonetheless, over 80% of those who had read a report could identify at least one risk factor for severe or fatal asthma. These results appear contrary to the general conclusion of a systematic review on the effectiveness of printed educational materials.¹ The reviewers tentatively stated that "the effects of printed educational materials compared with no active intervention appear small and of uncertain clinical significance". In contrast, our results suggest that locally generated printed guidance on a specific major health issue can have an important impact on knowledge and reported clinical practice. ■

References:

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Figure 1: Number of risk factors identified by respondents who either had or had not read an East Anglian Confidential Enquiry into Asthma deaths Report

