General practitioners' views on genetic screening for common diseases

MARC A SUCHARD

PATRICIA YUDKIN

JANET S SINSHEIMER

GODFREY H FOWLER

SUMMARY

In a questionnaire survey of 359 general practitioners (response rate 94%), 60% accepted the need to provide genetic services, but far fewer felt competent to do so. Nevertheless, as many as 76% had referred patients to a genetics unit in the past year, and 50% had counselled about genetics.

Keywords: general practitioners; genetic screening; genetic counselling; genetic disorders; questionnaire survey.

Introduction

LEADING geneticists, and several key health policy reports in the United Kingdom (UK), identify primary care as a possible location for the provision of genetic services for common diseases,[1,2] such as Alzheimer's disease, breast cancer, and cardiovascular disease. Possible roles for general practitioners (GPs) include making initial contact with concerned patients, taking family histories to assess risk, referring patients for genetic testing, and counselling patients about their genetic risks.[3] However, we do not know GPs' attitudes towards their involvement or their perceived ability to take family histories and give appropriate advice.

Method

We developed, piloted, and sent a single-page questionnaire, containing 14 questions and space for open-ended comments, to all 359 GPs registered with the Oxfordshire Health Authority as of 1 November 1996. We also sent two follow-up mailings to non-responders.

Results

The vast majority of GPs (339/359; 94%) returned questionnaires. Of the responders, 50% (95% confidence interval = 45–56) reported counselling patients about their genetic test results in the past year, and 76% (95% CI = 72–81) had referred patients for genetic testing or ordered a genetic test themselves. Thirty-eight per cent (95% CI = 33–43) had taken a course in medical genetics. The mean length of time since qualifying was 20 years (SD = 8). GPs who had taken a course in medical genetics qualified more recently than those who had not (16 compared with 22 years; difference = 6 years [95% CI = 4–8]).

Table 1 shows the levels of agreement GPs reported for each of the attitudinal statements. Sixty per cent (95% CI = 55–65) agreed or strongly agreed they should be involved with genetic screening for common diseases, and 78% (95% CI = 73–82) wanted to learn more about genetic screening. However, only 29% (95% CI = 24–34) felt sufficiently prepared to take family histories and draw pedigrees, and only 15% (95% CI = 11–19) felt sufficiently prepared to counsel patients about their genetic test results. Of those responders who had referred to a medical genetics unit in the past year, only 79/246 (32%) felt prepared to take family histories, and of those who had counselled about genetics, only 33/160 (21%) felt prepared to do so. Given the necessary training and information, 63% (95% CI = 58–68) and 64% (95% CI = 59–69) of the whole sample were willing to take family histories and counsel patients about their genetic results, respectively.

To identify possible constraints on GPs' involvement with genetics, we asked responders if they would participate in further research. One hundred and sixty-three out of 339 (48%) agreed. Of those not wanting to participate in further research, 158/176 (90%) gave 'not enough time' as a reason.

From the 68 comments received, 38 (56%) mentioned a need for more time and funding to provide genetic services. Eight (12%) identified a lack of referral/information guidelines and the need for further training for GPs in genetics. Twenty-one (31%) GPs raised ethical issues about genetic screening for common diseases, including increased anxiety among patients, screening for untreatable diseases, insurance discrimination, and disclosing genetic information among family members.

Discussion

This is the first study in the UK to elicit GPs' attitudes toward providing genetic services for common diseases and their perceived abilities in this area. It appears that many GPs have been faced with a need to provide genetic services even though they do not feel adequately prepared to do so. Similar findings have been reported previously; from a study of physicians' use of commercial APC gene test results in the United States (US), as many as 32% misinterpret the results for their patients.[4] There is clearly a need to improve the skills of GPs in this area; however, there are at least two potential barriers: conventional methods of training are of limited effectiveness,[5] and, in our study, a substantial group of GPs stated that they would not be willing to take family histories, or to counsel about genetics even if they had been given training and information; their responses indicated that lack of time was a major deterrent. 'Practice-enabling' strategies,[6] such as computerized aids to help determine familial risk, may improve performance without demanding too much time from GPs.

Finally, the ethical issues raised by genetics may also deter GPs and mirror the attitudes of obstetrician-gynaecologists in the US toward genetic breast cancer screening.[7]

M A Suchard, BA, Howard Hughes Medical Institute predoctoral fellow; and J S Sinsheimer, PhD, assistant professor, Wellcome Trust Centre for Human Genetics, University of Oxford. P Yudkin, MA, DPhil, university research lecturer; and G H Fowler, FRCP, FRCGP, professor of general practice, ICRF General Practice Research Group, Division of Public Health and Primary Health Care, University of Oxford, Radcliffe Infirmary, Oxford.

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Table 1. Attitudes of GPs about genetic screening for common diseases. Values are numbers (percentages in brackets) of GPs.

Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Believe in involvement for diseases like Alzheimer's disease, breast cancer, and cardiovascular disease	32 (10)	165 (50)[a]	80 (24)[b]	32 (10)	19 (6)
Feel sufficiently prepared to take family histories and draw pedigrees	14 (4)	83 (25)[b]	72 (22)[a]	132 (40)[b]	29 (9)
Feel sufficiently prepared to counsel about genetic test results	3 (1)	47 (14)	69 (21)[b]	166 (50)[a]	47 (14)
Given the necessary training and information, are willing to take family histories and draw pedigrees	30 (9)	178 (54)[a]	62 (19)[b]	47 (14)	13 (4)
Given the necessary training and information, are willing to counsel about genetic test results	30 (9)	182 (55)[a]	55 (17)[b]	46 (14)	19 (6)
Want to learn more about genetic screening for susceptibility to common diseases	61 (19)	195 (59)[a]	49 (15)	16 (5)	8 (2)

[a]Median range; [b]interquartile range.

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Address for correspondence

Marc A Suchard, Department of Biomathematics, UCLA Medical School, Los Angeles, CA 90095-1766, USA. E-mail: msuchard@ucla.edu