Experiences and expectations of the new genetics in relation to familial risk of breast cancer: a comparison of the views of GPs and practice nurses

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Background. Advances in genetics may change the practice of medicine in many ways. Ascertaining practitioners’ perceptions about managing the risk of familial breast cancer can give an insight into the current and expected impact on general practice to inform relevant education. Little is known about the practice nurses’ (PNs) views of the new genetics in comparison with those of the GP.

Objectives. Our aim was to describe and compare the views of GPs and PNs on their experiences and expectations of the new genetics in relation to managing familial risk of breast cancer.

Method. A questionnaire, assessing views on the current and future impact of genetic advances in general and on the management of women with a familial risk of breast cancer, was sent to all GPs and PNs in the 66 practices of the Cambridge and Huntingdon Health Authority.

Results. There was a 69% response rate. The words ‘cautious’, ‘mixed feelings’, ‘hopeful’ and ‘optimistic’ were used most frequently in response to views on genetic advances, but PNs chose more positive words than GPs ($P < 0.001$). PNs were also more optimistic than GPs in relation to the future positive impact of genetics on practice ($P < 0.0001$). Sixty-one per cent of GPs and 45% of PNs agreed that genetic advances in relation to breast cancer were already affecting their work. A minority of practitioners had attended recent educational events in risk assessment for breast cancer, and only 8% of GPs reported a practice policy on familial breast cancer risk management.

Conclusions. GPs and PNs show a cautious optimism in relation to advances in genetics, with PNs most optimistic. Many perceive that genetic advances in relation to breast cancer are already affecting their workloads, yet educational attendance and practice policies are lacking. Given PN involvement, multi-professional education may be appropriate. Education about risk management, including family history and genetics, might be better integrated into more general teaching on the prevention and management of breast cancer, than taught alone.

Keywords. Breast cancer, education, family history, genetics, GPs, practice nurses, primary care.

Introduction

Advances in genetics may eventually change the way we think about disease risk, diagnosis and management. Genes predisposing to chronic disease are now being identified, and genetic risk assessment may soon be integrated into primary care, e.g. the early detection of common familial cancers such as breast and bowel cancer. Previous studies have shown that GPs lack confidence in this area, requiring clear management guidelines and wanting education on how to make referral decisions. The views of practice nurses (PNs) compared with GPs are not known, although there is evidence that PN s and GPs have differing attitudes in other areas. If this is also true of genetic risk assessment, it will have implications for both the content of educational...
programmes and the potential for a team approach to learning. This study investigates the views of GPs and PNs towards the new genetics in general and assesses its impact on practice in relation to the management of familial risk of breast cancer. The aim is to inform the development of appropriate educational strategies.

Method

Based on a review of published work a questionnaire was developed, containing questions to assess views about (i) management of familial risk of breast cancer: experience, education and guidelines; (ii) current impact of genetic developments; and (iii) current and future impact of genetic advances in relation to breast cancer. It was piloted among 11 practice teams in South Bedfordshire with the indicated modifications made, and then sent to all GPs and PNs in the 66 practices of the Cambridge and Huntingdon Health Authority. Non-responders were followed up by letter. Data were analysed with SPSS for Windows, using parametric and non-parametric statistics as appropriate. Tests were two-tailed, and a 5% level of significance was used (\( \alpha = 0.05 \)).

Results

A total of 482 practitioners (277 GPs, 205 PNs) in 66 practices were surveyed, with a response rate of 69% (201 GPs, 132 PNs). Fifty-five per cent of responding GPs were male and 60% were aged under 45 years, similar to the Cambridge and Huntingdon Health Authority (61% male; 61% < 45 years), but differing from the national picture where there are more male doctors. Ninety-six per cent of respondent PNs were female.

Management of familial risk of breast cancer: experience, education and guidelines

The great majority of both GPs and PNs reported considering discussing family history with a woman consulting with concerns about her risk of breast cancer (GPs = 90%, PNs = 91%). Sixty-four per cent of GPs and 51% of PNs estimated that they had seen one or more patients in the last 3 months consulting about their risk of developing breast cancer due to a positive family history, but few estimated seeing more than one per month (GP = 5%, PN = 8%). Only a third of practitioners (GP = 33%, PN = 33%) reported attending education about risk management for breast cancer in the last 3 years, and a minority of practitioners had a guideline policy on management of a family history of breast cancer (GP = 8%, PN = 21%).

Attitudes to current impact of genetic developments

Developments in genetics evoked more ‘positive’ and ‘neutral’ word responses than ‘negative’ ones from both groups (see Fig. 1). The most frequently chosen words were ‘cautious’ (GP = 48%, PN = 54%), ‘hopeful’ (GP = 37%, PN = 54%), ‘mixed feelings’ by GPs (42%) and ‘optimistic’ by PNs (36%). PNs chose significantly more positive words than GPs (mean ± SD: GP 0.69 ± 0.11, PN 1.08 ± 0.16; Wilcoxon Z-score = -4.02, \( P < 0.001 \)), and significantly fewer negative words (GP 0.29 ± 0.07, PN 0.17 ± 0.07; Wilcoxon Z-score 2.15, \( P = 0.031 \)).

Attitudes to genetic advances in relation to breast cancer

The majority of practitioners agreed that patients’ expectations were already being raised (GPs = 65%, PNs = 66%), and that discussions about risks of breast cancer were becoming increasingly frequent (GPs = 69%, PNs = 72%). A large minority felt that potential genetic risk was making patients anxious (GPs = 45%, PNs = 32%), and that the current level of advance was doing more good than harm (GPs = 21%, PNs = 26%). Sixty-one per cent of GPs agreed that genetic advances were affecting their work already, significantly more than PNs (45%: \( U = 9968.5, P < 0.001 \)). More PNs than GPs expressed a positive attitude towards the future impact of genetic advances on the early diagnosis and treatment of breast cancer over the next 5 years. Thus 32% of PNs compared with only 12% of GPs agreed that genetic advances would revolutionize their ability to prevent breast cancer (U = 8137.0, \( P < 0.001 \)), and 45% of PNs compared with 25% of GPs agreed that genetic risk would fit comfortably into the general assessment of patient risk in primary care (U = 9292.0, \( P < 0.001 \)). Practitioners were more positive about genetic advances permitting earlier diagnosis of breast cancer (PNs = 79%, GPs = 55%), and in agreeing that their main job will be to reassure patients that they are not at excessive risk (PNs = 47%, GPs = 60%).

Discussion

The 69% response rate suggests that these data are generalizable to the populations of GPs and PNs. Most practitioners reported considering discussing family history in the case of a woman consulting with concerns about risk of breast cancer. However, apart from enquiries about coronary heart disease, routine or even opportunistic family history taking is not common in general practice, although primary care workers can record reliable family histories with appropriate training. Estimates of frequency of consultations about a family history of breast cancer were relatively low, and similar to published reports, but the majority of practitioners judged that expectations are being raised, and that discussions about risks of breast cancer are becoming more frequent in practice. Only a minority of practitioners had received recent relevant education or had access to management guidelines. Education...
about family history, genetics and risk management might reach more practitioners if it was integrated into teaching on the prevention and management of breast cancer in general rather than taught separately as 'genetic advances', and was linked to computerized consultation support.

We found clear differences in the attitudes and experiences of PNs, which could usefully inform multi-professional education strategies. In comparison with previous reports on attitudes to genetic developments, the PNs were closer to the positive views of geneticists and the GPs closer to the more ambivalent views of the general public.9 While the majority of practitioners agreed that genetic advances would permit earlier diagnosis of breast cancer in the next 5 years, only a minority agreed that genetic advances would revolutionize our ability to prevent breast cancer, suggesting realistic caution about the development of cancer prevention options. However, PNs were significantly more optimistic than GPs, as in previous reports where PNs were more positive than GPs about screening for disease limitation and prevention in general.4

In conclusion, GPs and PNs show a cautious optimism in relation to advances in genetics, with PNs being more optimistic. Many perceive that genetic advances in relation to the management of familial risk of breast
cancer are already affecting their workloads, yet educational support and practice policies seem to be lacking. Multi-professional education strategies should take into account the different experiences and expectations of PNs and GPs documented here, and link them to the evidence base appropriately. Education about risk management, including family history and genetics, might reach more practitioners if integrated into teaching on the management of breast cancer as a whole rather than taught separately.

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References