GPs' experience and attitudes toward new genetics: barriers and needs

Qi Rong Huang, MBBS, PhD, GradDipHIM, is lecturer, School of Health Information Management, The University of Sydney, New South Wales.

Lyndal Trevena, MBBS (Hons), MPhilPH, is lecturer, School of Public Health, The University of Sydney, New South Wales.

Jean McIntosh, SRN, is research officer, School of Health Information Management, The University of Sydney, New South Wales.

Advances in human genetic research have steered us into the era of the 'new genetics', ie. understanding genetics at the molecular level. The hereditary nature of many conditions and the availability of genetic testing have the potential to markedly increase questions from patients about genetic diseases. General practitioners will increasingly be called upon to provide genetic services to their patients.[1,2] But how well prepared are GPs to face this unfamiliar discipline?[2] We aimed to explore this by a survey of GPs' views.

Methods and results

We conducted an online survey from July 2002 to February 2003 among GPs of the General Practice Computing Group (GPCG) (GPs comprised approximately 70% of 503 members) and a postal survey from August to November 2003 among GPs of the Western Sydney Division of General Practice (WSDGP) (n=364). The questionnaire used was designed to collect data about genetic counselling and testing, barriers to obtaining genetics information, the impact of genetics on general practice, and educational needs.

The response rate was 18% (43 responses from GPCG and 86 from WSDGP). Most (74%) of the responding GPs were in partnership with two or more GPs, and 92% had graduated more than 10 years previously (34% >20 years). Respondents estimated the number of consultations for genetic conditions as low (<3 per week for 94% of GPs), representing less than 5% of total work time. Nearly all respondents (95%) acknowledged inadequate new genetics knowledge, and 83% lacked confidence in offering genetic counselling. Only one-third of respondents knew the meaning of polymerase chain reaction, although 60% thought such molecular genetics literacy was necessary in general practice. The main source of genetic information was textbooks, followed by 'Medline/PubMed'. The majority (90%) of respondents were unaware of Online Mendelian Inheritance in Man and GeneTest, two online databases for genetics. Major barriers cited by respondents to confidence in delivering genetic services included inadequate training in new genetics, inability to keep up with research, the overwhelming amount of genetic information available, and

Table 1. Suggestions for general practice divisions' role in genetic education

- Provide single laminated information sheets, leaflets or information packs for common genetic conditions
- Arrange educational events such as meetings and seminars
- Offer advocacy and support
- Organise CME in conjunction with local experts
- Provide opportunities for training in new genetics
- Distribute pamphlets on tests and referrals to give to patients
- Facilitate updating via CME
- Provide education resources/references
- Provide overview of advances and current practice in new genetics
- List knowledge sources and impact of research on ethical and social issues for GPs and patients
- Provide funding for information sessions
- Establish a nationally coordinated and publicly funded upskilling project
- Recommend appropriate software
- Provide information on good online resources and training in their use
- Provide updated handbooks of available genetic tests and resources
- Arrange periodic clinical meetings with simplified genetic lectures

time constraints in seeking out appropriate information. Some GPs considered new genetics a low priority in competing with the many other areas of education. Nevertheless, 88% expressed an interest in future education in genetics.

General practitioners accepted they had a role in genetic counselling and management of patients with genetic disorders (even if reluctant to become expert). They saw their main roles as referral of patients to specialist genetic centres (ie. a gatekeeper role) and offering genetic information. Over 80% of respondents thought integrating genetic counselling into their practice was challenging, but acknowledged it would improve quality of care. They suggested ways to facilitate genetic education (*Table 1*).

Discussion

As the study sample included only two groups of the Australian general practice workforce and the response rate was low, the representativeness of the survey population and thus the generalisability of the results are unknown. These data can thus only suggest hypotheses, although they reflect previous findings overseas[3] and in Australia.[4] In view of the barriers to providing adequate genetic care identified, GPs low involvement in genetic services may be the consequence of inadequate genetics training, lack of support in uptaking knowledge, and poor information access. The suggestions for continuing medical education in genetics could inform models for education, training and support such as the Australian Resource Network for Clinical Genetics (ARCGeNet: www.arcgenet.org.au) which was developed in response to these needs.

Acknowledgments

Thanks to Professor M Kidd and Dr P Clyne, CEO of WSDGP for advice and assistance, and to the University of Sydney for research funding.

Implications of this study for general practice

- Advances in human genetic research will have an impact on general practice in the future.
- GPs felt inadequately equipped with knowledge of new genetics.
- They nominated barriers to the uptake and translation of this knowledge into patient care.
- They expressed willingness to undertake further education in genetics.

Conflict of interest: none declared.

References

1. Mann L. The general practitioner and the 'new genetics'. Med J Aust 2003;179:109–111.
2. Watson EK, Shickle D, Qureshi N, Emery J, Austoker J. The 'new genetics' and primary care: GPs' views on their role and their educational needs. Fam Pract 1999;16:420–425.
3. Emery J, Watson E, Rose P, Andermann A. A systematic review of the literature exploring the role of primary care in genetic services. Fam Pract 1999;16:426–445.
4. Metcalfe S, Hurworth R, Newstead J, Robins R. Needs assessment study of genetics education for general practitioners in Australia. Genet Med 2002;4:71–77.

AFP

Correspondence
Email: j.huang@fhs.usyd.edu.au