Research in family medicine and general practice: are we there yet?

Carol P Herbert

LIKE the Israelites in the desert, for nearly 40 years we have wandered, wringing our hands over the future of general practice as a discipline and attempting to find the Promised Land: a research agenda for general practice and family medicine. We know that one of the defining characteristics of an academic discipline is that it has a distinct body of knowledge that is advanced by scholarship and can be taught to practitioners in the discipline. We have struggled to define what scholarship should be in our specialty.

How different we are from other disciplines! One does not hear the internists or the surgeons struggling over what should be their research agenda. There is a fundamental expectation that their researchers will ply their trade and transfer the information to practitioners. Why are we so self-referential and unsure of ourselves that we worry about defining a research agenda for general practice? Do we need to justify that we are honest members of the academic establishment?

How far have we come?

In reflecting upon the proposed research agendas for general practice/family medicine, a basic question is: 'What are the desired outcomes of research in a practice-based discipline?' These outcomes vary according to the developmental stage of the discipline and the context of practice at the time. Thus, in the 1960s, as family medicine emerged as a discipline in North America, the emphasis was on education of practitioners who would care for the person and who would restore the idea of context and relations in medicine. 'Our energies were directed inward, towards justifying ourselves, towards creating our roles and toward attempting to solve our patients' medical problems.'[1] Little attention was paid to research at that time. However, as early as 1966, McWhinney identified the family medicine research arena as follows: evaluation of signs, symptoms, and diagnostic tests, epidemiology of illness; physical and mental development; behaviour; and social influence.[2] Over the next decade, others emphasised clinical strategies, health care services, educational methods and behavioural medicine,[3,4] the family,[5,6] the spectrum of disciplines from biomedical science to social science; the continuum from pathogenesis of disease to health services and public policy; and a range of approaches from individual research to multi-centred trials.[7]

In 1982, The Study Group on Family Medicine Research[8] made a number of recommendations that sound eerily familiar. They pointed out particular areas where family medicine could make a special contribution, including health and disturbed health, health care delivery, and medical education. They recommended that practicing family physicians should conduct research in their own practices, that family medicine teachers should conduct research and assist practice-based researchers, and that practitioners and teachers should recognise the importance of research and apply the results of research. They recommended to academic units that faculties should be given protected time, that learners should have research elective time, and that Family Medicine Research Centres should be developed as a resource to teachers and practitioners. They recommended to family medicine professional organisations that they should raise funds to support research, provide forums, and communicate the research activities and needs of family medicine to other constituencies.

Nigel Stott in 1987[9] emphasised that human behaviour can only be understood in the cultural and environmental context of the individual and argued for ethnographic methods. This line of argument justifies the broadening of research methods that has occurred over the past decade and a half.

By 1991, Culpepper[10] broadened his target community to all of the disciplines who provide primary care. He suggested two major research themes:

1. questions directly applicable to practice; and
2. questions that integrate biological changes with individual perceptions, feelings and values, and with social interaction.

C P Herbert, MD, CCFP, FCFP, dean of the Faculty of Medicine & Dentistry, University of Western Ontario, Canada. This essay is based on a keynote address for WONCA Europe, 9–13 June 2002, London, UK.

Carol P Herbert, University of Western Ontario, Health Sciences Addition, London, Ontario N6A 5C1. E-mail: carol.herbert@fmd.uwo.ca

Submitted: 11 March 2002; Editor's response: 16 April 2002; final acceptance: 16 April 2002.

He defined three areas of integrative research: interactions between patient and physician; interactions between the family and individual health; and investigation of effects of the community on individual health.

Culpepper suggested that there was strategic value to a research agenda, both to obtain funding for the questions of interest to the discipline and to encourage the development of cross-specialty collaboration. His research agenda would respond to the major sources of morbidity that primary care can influence. While there was still a need for basic descriptive and exploratory work, including natural history studies in primary care settings, the discipline must become theory-based with investigations grounded in the Institute of Medicine definition of primary care: 'The provision of integrated, accessible, health care services by clinicians that are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing within the context of family and community'.[11]

In 2000, Jones[12] drew similar conclusions when he wrote that the 'ends' of primary care research have to be the improvement of quality, effectiveness, and cost effectiveness of primary care. The research questions need to spring from the realities of providing primary care services in communities.

In a paper presented at the Keystone III Conference, Stange, Miller and McWhinney[13] placed the research agenda for family medicine in a theoretical context when they argued that we have a special approach to knowledge building, ' … a multi-method transdisciplinary participatory approach is needed to create knowledge that retains its connections with its meaning and context and therefore is readily translatable into practice'.

Where is 'there'?

So where are we in 2002? We have developed models for practice-based research networks, promoted evidence-based medicine, created a theory of patient-centred medicine, and changed practice by our work in areas such as clinical outcomes, mental health, and prevention. We have come a long way, as evidenced by the world literature in family practice and the contributions of family medicine and general practice researchers in the general literature. But it is Roger Jones who points the way to where 'there' is, in his emphasis on quality, cost, and effectiveness. In a health care system that is out of control in the developed world, we have a special opportunity as researchers who work in primary care to study how evidence-based health care services can be delivered in a sustainable way to individuals within communities, within the definition of primary care. This is health services and health care research that matters greatly to the health care and health outcomes of our nations.

Particular communities demand our attention. Starfield speaks of the need to improve equity in health, an agenda that reminds us of the roots of family medicine.[14] We have a role to play in studying differences in practice, experience, and outcome for subgroups characterised by different ages, ethnicity, sex, and socioeconomic status, including income, education, and occupation. As we go forward, there is a special place for primary care researchers who work at the interface with communities, have skills and experience in participatory action research, and incorporate ethnography to enable thick and rich description.[15]

In the complex system of health care and the rapidly changing technological environment in both basic and applied science, it is essential that family medicine/general practice researchers are engaged as members of interdisciplinary health research teams — experts in their own right, brave enough to stand with others and bring the special viewpoint of the generalist and of the practitioner. The new emphasis by federal granting agencies on multidisciplinary teams and on broadening research beyond the traditional bench and biomedical, increases the likelihood of primary care research teams of receiving funding, as well as the need for inclusion of primary care researchers in research teams that target primary care practice for description or intervention. Not to engage family physicians or general practitioners in the development of research in primary care has been described as ' … a modern form of colonisation at intellectual and professional levels'.[16]

If changing health care systems and primary care reform afford us research opportunities, they also represent a challenge to the traditional model of the individual family physician seeing his or her patients. In the United Kingdom, the General Practice Unit is a multidisciplinary setting wherein shared care has been the norm for many years. It behoves other countries to create settings wherein primary health care practitioners from a range of disciplines can provide continuous comprehensive care.

A related challenge is that family physicians themselves have been giving up medical services that a well-trained family physician can deliver; for example, maternity care, office surgery, or care of the dying. As a practice-based discipline, family medicine/general practice research will evolve with our changing roles in the health care system. However, if we become restricted service physicians — medical technicians *du jour* who provide episodic care for common illnesses by algorithm; nine-to-fivers; 'docs in a box'[17] — to patients we do not know, it can be argued that there will be no discipline of family medicine to research. Full-service family doctors may soon only be found in rural communities where they must provide a full range of services because there is limited availability of other health and social service professionals.

How do we get 'there'?

We have six main tasks if we are to get 'there'; that is, if we are to have major impact on understanding what is 'best practice' in primary care, on disseminating and implementing evidence, and on changing health outcomes. First, we must ensure that our trainees will have a positive research attitude. All of our teachers must recognise the importance of asking and answering the questions of primary care and general practice in our settings with patients that look like our patients. We must teach from our literature, pointing out the knowledge that we have built, both theoretical (such as the patient-centred model[18]), and practical (such as the management of spontaneous abortion). We must demonstrate critical thinking and a commitment to evidence-based

medicine, where the evidence that counts is not only the randomised controlled trial but also the particularities of the individual in their social context.[19] We must support resident projects and create educational and career paths to encourage young investigators.

Second, we must develop clinician-researchers. Carole Bland and Constance Schmitz[20] identified qualities of successful researchers. They noted early demonstration of scholarly interest, with publications in the first five years predicting later output. They also defined the role of mentors as critical to development. A key element of capacity building in North America has been the formal development of mentoring relationships for a promising faculty. Within our university departments, we must proselytise research career paths and make them possible, providing protected time and assistance with grant preparation. We also need education for mid-career clinicians who want to do research — as primary investigators, participants in research or contributors of questions.

Third, we must continue to lobby our funding bodies to devote funding to primary care research, to include primary care researchers on grant panels, and to build research capacity. The state of affairs in 2002 is that only a tiny percentage of national research funding in any country goes to primary care research.[21] However, capacity building has become a major activity for the North American Primary Care Research Group (NAPCRG) over the past few years, with consequent early success seen in new NIH grants to primary care researchers. Meanwhile, both the NHS and the MRC in the UK have defined the major need for building research capacity in primary care research.[22,23]

Elsewhere in Europe, countries have been evolving their primary care research in relation to their health care system. In Spain, a reform process in primary care began in 1985, with an evolving public health service with full-time salaried physicians who work for primary care centres.[24] Research in the new specialty of family medicine has been focused on demonstrating the effectiveness of the primary health care approach, with most of the primary care research carried out in government health centres. In all European countries, while early primary care research was mostly descriptive,[25,26] more complex studies are being published lately.

Fourth, we must support and nurture the practitioners who may be stimulated to do clinical research in their own practices in the tradition of Pickles, Mackenzie, and McWhinney. While most family medicine researchers with protected time will be in academic departments, a precious few private practitioners will beaver away in their offices and community settings, asking and answering important questions, obtaining funding as needed, and borrowing time from practice and family 'Peter' to pay research 'Paul'. McWhinney reminds us that we should not lose sight of the special opportunity that a general practitioner has to observe, record, classify, and analyse day-to-day clinical experiences over long periods of time, in that tradition.[27] He states four reasons for neglect of clinical research: misunderstanding the structure of medical knowledge (the importance of taxonomic science that details the natural history of disease); lack of awareness of the limitations of clinical trials (highly selected populations over short follow-up); lack of confidence in our own ability to add to knowledge; and devaluation of descriptive taxonomic science in biology as a whole.[28]

Fifth, we must sustain our practice-based research networks.[29] Indeed, Kernick, Stead and Dixon, argue that primary care groups should be the locus for health services research — outside of academic centres and university departments.[30] University-based primary care researchers must be well connected to community-based physicians and other health care professionals who are delivering health care services to patients in communities, if their questions are to remain relevant.

Finally, we must study what matters. While we acknowledge the dilemma of academe, where promotion and tenure are time-limited processes with prescribed steps to the dance, we must find ways to support longitudinal research. We must examine major cost-drivers in diagnosis and treatment, prevalent and serious illnesses, fundamentals of how decisions get made by doctors and patients, and the impact of health and illness on patients and providers. We need to interact with our communities of patients as partners in research.

Are we 'there' yet? As long as we get the right people on the bus and we have enough fuel, we can and will continue on the journey towards the destination of better health care and improved health.

References

1. Rodnick, JE. Research in family medicine: counterculture continued. *Fam Med* 1987; **19:** 251-252, 305-307.
2. McWhinney IR. General practice as an academic discipline: reflections after a visit to the United States. *Lancet* 1966; **1:** 419-423.
3. Geyman JP. Toward a research base in family practice. *J Fam Pract* 1975; **2:** 3.
4. Wood M, Stewart W, Brown TC. Research in family medicine. *J Fam Pract* 1977; **5:** 62-77.
5. Shank JC. A taxonomy for research. *Fam Med Teacher* 1980; **12 (Sept-Oct):** 22-23.
6. Medalie JH, Kitson GC, Zyzanski SJ. A family epidemiological model: a practice and research concept for family medicine. *J Fam Pract* 1981; **12:** 79-87.
7. Phillips TJ. Research considerations for the family physician. *J Fam Pract* 1978; **7:** 121-128.
8. Parkerson GR, Barr DM, Bass M, *et al*. Meeting the challenge of research in family medicine: Report of the Study Group on Family Medicine Research. *J Fam Pract* 1982; **14:** 105-113.
9. Stott NCH. Research in general practice: a rapidly changing scene. *The Practitioner* 1987; **231:** 929-930.
10. Culpepper L. Family medicine research: major needs. *Fam Med* 1991; **23:** 10-14.
11. Donaldson M, Yordy K, Vanselow N. *Primary care: America's health in a new era*. Washington, DC: Institute of Medicine, National Academy Press, 1996.
12. Jones R. Primary care research: ends and means. *Fam Pract* 2000; **17:** 1-4.
13. Stange KC, Miller WL, McWhinney I. Developing the knowledge base of family practice. *Fam Med* 2001; **33:** 286-297.
14. Starfield B. Improving equity in health: a research agenda. *Int J Health Services* 2001; **31:** 545-566.
15. Macaulay AC, Commanda LE, Freeman WL, *et al*. Participatory research maximizes community and lay involvement. *BMJ* 1999; **319:** 774-778.
16. O'Dowd T. Research in general practice: who is calling the tune? *Br J Gen Pract* 1995; **45:** 515-516.
17. Herbert CP. The future of family medicine research. *J Fam Pract* 2001; **50:** 582-583.
18. Stewart M, Brown JB, Weston WW, *et al*. *Patient-centered medicine: transforming the clinical method*. Thousand Oaks: Sage Publishers, 1995.
19. Greenhalgh, T. Intuition and evidence — uneasy bedfellows? *Br J Gen Pract* 2002; **52:** 395-400.
20. Bland CL, Schmitz CC. Characteristics of the successful

researcher and implications for faculty development. *J Med Educ* 1986; **61:** 22-31.
21. Jones R. New arrangements for NHS R&D funding: implications for primary care research. *Br J Gen Pract* 2001; **51:** 7-8.
22. Medical Research Council. *Primary health care. Topic review*. London, UK: Medical Research Council, 1997.
23. Mant D. *National working group on R&D in primary care: final report*. London, UK: NHS Executive, 1997.
24. Foldspang A, Hvidman L. Danish primary health care research 1950-1980. *Scand J Prim Health Care* 1985; **3:** 183-188
25. Haglund BJA. Research and development work in primary health care in Sweden. *Scand J Prim Health Care* 1985; **3:** 107-112.
26. Gene-Badia J, Jimenez-Villa J, Martin-Zurro A. Family practice research in Spain. *Fam Pract Res J* 1993; **13:** 7-15.
27. McWhinney IR. Why are we doing so little clinical research? Part 1. Clinical descriptive research. *Can Fam Phys* 2001; **47:** 1701-1702.
28. McWhinney IR. Why are we doing so little clinical research? Part 2. Why clinical research is neglected. *Can Fam Phys* 2001; **47:** 1944-1946.
29. Green L. Putting practice into research: a 20-year perspective. *Fam Med* 2000; **32:** 396-397.
30. Kernick D, Stead J, Dixon M. Moving the research agenda to where it matters. *BMJ* 1999; **319:** 206-207.