



PODIUM: DOCTORS SPEAK OUT LA PAROLE AUX MÉDECINS

Generalism versus subspecialization: Changes necessary in medical education

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During the initial Partners Meeting of the Association of Faculties of Medicine of Canada (AFMC), the Canadian Association for Medical Education (CAME), the College of Family Physicians of Canada (CFPC), the Medical Council of Canada (MCC), and the Royal College of Physicians and Surgeons of Canada (RCPSC) in May 2005, a plenary discussion and debate focused on the tensions that exist between generalist and subspecialty education within both the undergraduate and postgraduate educational programs in Canadian medical schools. Key issues identified in the debate included medical student selection, generalist representation on medical school faculty and in learning experiences, and the need for a greater teaching role and respect for generalism to be developed.

Over 600 participants listened to data from the National Physician Survey (NPS), the Canadian Post-M.D. Education Registry (CAPER), and a debate on the issues that influence and determine career choices by medical students and residents during the inaugural Partners Meeting. This document focuses on the key issues raised during the presentations and the debate, the audience comments (both oral and written), and recommended directions for change in educational approaches.

Although the ratio of practising family/general physicians to specialists has remained relatively constant over the last decade (52:48), the number of medical students making Family Medicine their first career choice match has declined from 44% in 1992 to about 25% in 2003, with some improvement in 2004.¹ Practice entry into generalist specialties that serve a critical role in the provision of medical care in rural communities, including General Internal Medicine, General Surgery, Obstetrics and Gynecology, Pediatrics and Psychiatry, has dropped from 35% of

all Royal College-registered residents certified in 1995 to 25% in 2004.²

Why is this a concern? Generalist physicians, including both family physicians and generalist specialists, deliver an enlarged scope of practice, covering health needs of populations in rural and remote parts of Canada as well as defined urban communities. A generalized care model has health care providers who have a better understanding of the community context, the patient's total health status, and options to respond to current patient needs. Services are generally accessible, particularly in smaller communities, and there is greater likelihood of a long-term relationship between health care provider and patient. A specialized care model is characterized by more highly concentrated expertise available to address rare or complex problems, with service access concentrated in larger communities, resulting in greater fragmentation of care and a higher incidence of short-term relationships between health care providers and their patients. The subspecialist has a substantial depth of knowledge about spe-

cific disease entities and possesses the skill set necessary to diagnose and treat those diseases. In recent years, there has been a tendency to equate more specialized care with higher quality care.

The generalist possesses a breadth of knowledge and uses an integrative approach to a patient's problems. Decision-making in the context of uncertainty and acceptance of care partnerships in the management of an individual's illness characterize the generalist's care model. However, recent data from the NPS⁵ suggest that many general practitioners are limiting their breadth of knowledge and skills, as only 6.3% of all Canadian family physicians are now offering comprehensive patient care from "cradle to grave." For some time now, generalized medical knowledge and skills have been devalued in physician-controlled compensation schemes. This devaluation of generalized medical knowledge and skills by the profession itself is one factor that has discouraged the next generation from pursuing careers in fields requiring such knowledge and skills.

By definition, university environments promote specialized expertise and scholarly work. Medical schools do not escape this tendency. Medical school admission processes that emphasize marks and Medical College Admission Test scores tend to select students who are likely to prefer acquiring competency and expertise within a narrow field.

Both in medical school as well as in residency training, learners quickly become aware that the health care system values specialist knowledge more than that of the generalist. Students perceive that many of their teachers in medical school, even for relatively introductory classes, are subspecialists and that family physicians and general specialists are relatively under-represented in full-time faculty positions in medical schools compared with both the physician mix and need in Canada. When students begin their clerkship rotations in tertiary care centres, they are mostly exposed to residents who are pursuing specialist-training programs, rather than family practice residents who train in more generalist settings. Daily, in their teaching or patient care experiences, students and residents hear that the generalist physician erred in the care of the patient and the specialist needed to step in to solve the problem. During clinical case discussions, the junior medical student hears learned discussions about the latest scientific papers with limited recognition on the part of teachers that the required background science has not yet been taught. Residents rotating on subspecialty services find that multiple consultations to other subspecialties are necessary to care

for a patient with more than one medical problem. The concept of caring for the whole patient is rarely modelled in the teaching environment for either medical students or residents. Training exclusively in a chosen discipline reduces quality of care for the chronically ill as training models tend to become practice models.

Other factors deterring students from considering generalist careers include rising tuition fees that are daunting, especially for students from small rural communities who may have limited family financial resources. Medical students are graduating today with formidable debt loads, resulting in career choices that generate higher earnings, such as procedural disciplines. Other major issues facing rural students interested in a career in medicine are outlined in a report of the Task Force of the Society of Rural Physicians of Canada.⁴ In pursuit of letters of reference for the most highly desirable residency positions, students seek interactions, including both clinical and research elective experiences, with subspecialists with national reputations. This then limits their exposure to generalist experiences during the time when career choices are developing.

Canadian medical schools face an interesting dilemma in attempting to resolve these problems. In provinces in which there is only a single medical school providing both health professional education as well as tertiary care for the entire province (e.g., British Columbia, Nova Scotia, Saskatchewan, and Newfoundland and Labrador), it would not be possible to provide generalist education alone. Other provinces with multiple medical schools may be able to create schools with a generalist mandate (such as the Northern Ontario School of Medicine), but students choosing to attend such schools will need to make career choices even earlier than medical students do now. As there is some evidence that students like to stay in the environment where they are trained, the experiments in Northern Ontario and other settings with distributed programs will be followed with interest by the entire medical education community.

Changes are necessary in medical education if students and residents are to be attracted to generalist careers. Recommendations arising from this discussion include the following.

- Admission processes must be examined to determine whether there is a selection bias toward applicants more likely to select specialty training.
- Generalists should have more teaching responsibility, including exposure to medical students

in the early years of the curriculum and a role in case development in problem-based learning environments.

- The portrayal of the generalist in case studies and the language used by subspecialists when discussing their generalist colleagues requires correction and a more supportive text.
- Enhanced patient-centred care in urban hospitals, incorporating generalists as part of the patient care team in tertiary care teaching settings, would provide a more appropriate model for students.
- Generalist role models and mentors are necessary at all levels of medical education and should be developed and rewarded for this activity.
- Collaborative teaching programs involving both generalists and subspecialists will provide models for learners to emulate in their own practices and may enhance communication and team skills.
- Accreditation bodies must develop accreditation requirements for the generalist-learning environment, and specialty accreditation committees should consider generalism as a fundamental requirement for all specialist training.
- Health care and health education institutions need to examine their mission statements, hiring practices and academic atmosphere to ensure that generalists feel not just welcome but absolutely necessary within their institutions.
- Promotion criteria and remuneration of generalists, particularly those practising in smaller communities where practice may be altered by the presence of a learner, require consideration by medical school authorities.
- More research into problems and issues faced by the generalist in practice needs to be done in order to help deal with these issues and to provide an academic base for the generalist within the academic environment.

- If all physicians were to accept the role of teacher as a condition of licensure and if academic departments accepted the expertise available in the generalist community, the opportunities for distributing learning out of the tertiary care centre and into the community would expand the number of generalists within the virtual walls of contemporary medical schools.

The choice of respectful language used during day-to-day activities with students and residents is probably the single most important individual action that teachers and supervisors can do to begin to change learner attitudes toward generalist careers. Other solutions, such as easing student debt burden, improving teacher remuneration or developing more distributed learning, require interaction between educators and policy-makers and will take time to implement.

Generalists may well be an endangered species. Medical schools and the medical profession need to take action if the health care system as it is currently designed is to survive.

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