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Training physicians for rural and northern British Columbia

Part of the reason for the acute shortage of physicians in northern BC is the way we have organized physician education for the past 30 years. The Northern Medical Program is a step in the right direction.

ABSTRACT: Rural and northern Canada are short of doctors. Medical schools have a role to play in ensuring that rural and northern populations receive equitable access to quality health care. To this end, the literature supports a number of initiatives: (1) preferentially admitting students with rural or northern backgrounds to medical school; (2) training interested students in those communities; (3) developing mentorship programs for undergraduate and postgraduate students with experienced rural physicians; and (4) providing opportunities for students to acquire competence in the procedural skills required in those communities. Innovative programs designed for this purpose merit support. One such initiative is the Northern Medical Program, a collaborative effort of the University of British Columbia and University of Northern British Columbia designed to bring undergraduate medical education to the north.

The life of full-service physicians working in British Columbia's northern and rural communities is a challenging one. They work long hours, often diagnosing patients without the help of modern technology and managing their care without immediate specialist backup. They work out of full-service offices (not episodic care centres), do house calls, manage complex and time-consuming cases, assume primary responsibility for hospitalized patients, and perform a wide variety of tasks and procedures at short notice and at all hours of the day and night.

Traditionally, medical facts—many of which ultimately become outdated—have been taught at medical schools, while the mastery of the art of medicine has been learned in the community under the mentorship of more experienced physicians. Over the past three decades, university-based academics and subspecialists working out of tertiary care hospitals have increasingly assumed responsibility for training physicians, including those who aspire to work in rural and northern communities.[1,2]

Not surprisingly, subspecialists inadvertently teach students that the highest calling in medicine is to specialize and may unwittingly give the impression that general practitioners cannot keep up with the volume of medical facts a competent physician must know. They teach students that mastery of special skills should be left to specialists and suggest that there will be severe medicolegal consequences for general practitioners who make mistakes while providing services best left to specialists.

The outcome of this medical education is predictable—fewer medical students choose to become generalists, whether family physicians or regional specialists. More and more newly graduated family physicians forsake traditional practice and become hospitalists, walk-in clinic doctors, or emergency care physicians. And increasing numbers of newly graduated specialists train to become subspe-

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cialists, often concentrating on a relatively small area within their discipline. Fewer and fewer family physicians are willing to do obstetrics. The end result is that fewer physicians plan to work in Canada's northern and rural areas.[2,3] At this time, more than 20% of Canadians live in rural and northern communities, yet these communities are served by only 10% of our physicians—17% of our family physicians and 3% of our specialists.[1,4,5]

New graduates will not acquire the skills they need and the confidence to apply them without the opportunity to work with experienced GPs already thriving in the full service role.

The number and proportion of rural physicians practising appear to be declining.[1,4] According to CMA data, the number of rural physicians in British Columbia dropped from 576 (12.9% of BC physicians) in January 1994 to 490 (11.1%) in January 1998.

Between 1995 and 1999, the population of Canada increased by 3.7%. During this same period, the ratio of family physicians (FPs) to population actually decreased by 3.1% (from 1:1031 to 1:1064). In 2002, the estimated FP-to-population ratio for Canada was 1:981. In contrast, the FP-to-population ratio for rural Canada was 1:1201.

The annual turnover of medical doctors in rural communities is increasing and is currently two to three times higher than rates reported for nonrural settings.[3,6] Communities formerly served by one or two physicians can expect to see up to 30 different locums in a year, as they wait, often in vain, for a doctor to settle in their town.

Compounding the challenge is the growing national shortage of physicians. An estimated 1175 additional family physicians are needed in rural Canada right now to bring the FP-to-population ratio up to the Canadian average. It is also estimated that 2500 new physicians are required annually just to maintain the current physician-to-population ratio across Canada, and that this number will increase to 3000 physicians by 2010.[1] At present, Canada's medical schools turn out a little more than half the number of physicians required.[2,3,7]

Polls suggest that 18% of BC doctors plan to retire in the next 5 years and 40% in the next 10 years.[7] For some time, the shortfall in British Columbia has been managed by recruiting doctors from other provinces and other countries. Currently, fewer than 20% of British Columbia's rural physicians are graduates of the University of British Columbia, about 40% were trained elsewhere in Canada, and about 40% obtained their medical degrees in foreign countries.[4,8]

There are several problems with relying on international medical graduates for rural medicine.[9] Firstly, the supply is uncertain. There is a worldwide shortage of doctors and working conditions elsewhere are often better than in British Columbia. Secondly, many will "do their time" in rural communities, then migrate to the city. Lastly, there is the ethical issue of Canada recruiting ("poaching") physicians from countries that have their own rural physician crises.[1]

Canadian medical schools now acknowledge a social responsibility to educate physicians for rural as well as urban Canada.[1,10] The University of British Columbia is in the midst of an ambitious expansion. What suggestions can we offer the medical school?

First, all medical schools need to raise the profile of primary care teaching. In the United States, those medical schools that commit to primary care and have given prominence to family medicine departments, graduate more family physicians.[11,12]

Second, medical schools must admit more rural applicants.[1] Current medical school admission policies unintentionally favor urban applicants—those least likely to settle in rural communities after graduation.[1,10,13] Studies have consistently shown that exposure to a rural lifestyle early in life and education in a rural community are the best predictors of young doctors choosing rural practice.[14-18] Such applicants are two to three times more likely to enter rural practice and, once there, are more likely to stay.

Third, all medical students should be exposed to rural medicine in order to nurture the interest of those who grew up in rural areas and perhaps kindle it for those who did not.[11,18]

Fourth and last, existing postgraduate rural residency training programs, under the mentorship of experienced family physicians, need to be supported, promoted, and expanded. Studies from British Columbia, Ontario, Australia, and elsewhere have consistently shown that postgraduate rural residency programs produce more rural physicians than urban-based family practice programs.[1,18-23] For example, 71% of graduates of the UBC Department of Family Practice Rural Program continue to practise in rural or regional settings.[21] In contrast, only 13% of graduates of urban-based Canadian family medicine programs choose such communities.[5]

Depending on where a rural practitioner locates, he or she will need training in certain advanced skills, including adult and pediatric resuscitation, simple fracture reduction, casting techniques, venous access, lumbar puncture, and endotracheal intubation.[24-26] There is little point in teaching these skills to those destined for urban family practice because they are likely to lose them through disuse. Currently, experience with these procedures is available to rural practitioners and those entering family practice residencies through the Rural Education Action Plan (REAP), a successful joint initiative of UBC, the BCMA, and the BC Ministry of Health Services.

Those responsible for training rural and other physicians must also recognize the reality that for today's graduates a balanced life is vitally important.[27] This is a natural and healthy change from past acceptance of onerous workloads, which were associated with physician burnout and other serious medical and social problems.[28] Many physicians, especially women with young children, want part-time work and are less likely to make a long-term commitment to a particular practice.[29] Medical school enrollment must take into account the fact that future doctors will not be working the long hours of their predecessors and that more doctors per capita will be required.

Mentoring of younger colleagues is a key element of rural training, recruitment, and retention. New graduates will not acquire the skills they need and the confidence to apply them without the opportunity to work with experienced general practitioners already thriving in the full-service role. For northern and rural practitioners, mentoring is not just a matter of passing the torch. It is a strategy for personal and professional survival—the only realistic, long-term means of recruiting the help required to carry on.

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There is immense enthusiasm for UBC's expansion to the north and early evidence suggests that northern and rural practitioners—family physicians and general medicine and surgery specialists alike—recognize an opportunity to change the dynamic that formerly gave responsibility for medical education to subspecialists based in tertiary hospitals. When the Northern Medical Society called for volunteers to serve as mentors to undergraduate students, they immediately received more offers than needed. During their first Vancouver-based semester, all 25 Northern Medical Program (NMP) students were brought to Prince George, at medical society expense, for a festive weekend. During the weekend, students obtained firsthand knowledge of the program and enjoyed social and recreational activities with their future mentors. In support of these students, the doctors of Fort St. John have pledged $100 000 to the NMP Trust, a bursary fund, with an implied challenge to colleagues in other northern communities to meet or exceed their contribution.

If this exciting initiative is to succeed, the infrastructure needed to train doctors "in the north and for the north" must be in place to ensure that physicians working in northern and rural communities have reliable access to world-class, appropriately staffed health facilities. The Prince George Regional Hospital is being upgraded to university-hospital standards, but a designated trauma centre and a full cancer treatment facility for the north are still needed, as is enhanced infrastructure in smaller communities. With a little more support from the

province, the medical school, our urban physician colleagues, and society at large we know that we can train student doctors to practise competently, show them that life and work in northern and rural communities is professionally and personally satisfying, and persuade them, in many cases, to stay and join us.

Competing interests

None declared.

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