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PHYSICIAN SUPPLY AND DEMAND

Over the past decade concerns have grown over what's been described as the most serious physician shortage in Canada since the creation of medicare. This paper examines the emergence of the physician shortage and efforts to increase and target the supply of doctors in underserved areas.

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Over the past decade concerns have grown over what's been described as the most serious physician shortage in Canada since the creation of medicare.[1] In 2001 more than 117,000 B.C. residents could not obtain a family physician, according to Statistics Canada.[2] It's a problem in other provinces as well: In a 2006 report by the Organization for Economic Co-operation and Development, Canada ranked 17th out of 21 countries in terms of the ratio of practicing physicians to patients. [3] This paper examines the emergence of the physician shortage and efforts to increase and target the supply of doctors in underserved areas.

INTRODUCTION

Early in 2008 the planned retirement of two of the four remaining physicians in the town of Princeton threatened to force the closing of the local hospital emergency department.[4] A third physician was planning to move out of town, and no replacements had been found.

The closure was averted, at least temporarily, when the town managed to recruit a physician from South Africa. One of the local doctors also postponed her move, while other physicians arrived to fill in on temporarily locums.[5] Princeton's experience illustrated the challenges faced by many B.C. communities, where mayors and business chambers sometimes find themselves in the unfamiliar role of medical recruiters and patient advocates. It also reflects a nation-wide and even international physician shortage which has forced policy makers to scramble for solutions.

Yet, not too many years before the physician shortage became apparent, governments across the country were taking action to control the growth in physician numbers because of a perceived oversupply.

TOO MANY DOCTORS

Justice Emmett Hall's federal Royal Commission on Health Services is best known for laying the foundation for Canada's universal medicare system in the 1960s. But the commission also studied the state of medical manpower in Canada and predicted a general shortage of physicians by the 1970s. Looking over data on doctors since the 1950s, the Commission noted, "existing evidence suggests there is a disproportion of physicians in the larger urban areas of Canada."[6]

As of 1961 the province-wide concentration of physicians in British Columbia was 758 patients for each doctor, but for non-metropolitan areas it was 1,229 to one. The two largest cities, Vancouver and Victoria, claimed 58 per cent of the province's population but 73.6 per cent of its physicians.[7] The report of the Hall Commission recommended creating at least four new medical schools in Canada and increasing medical school intake to meet population growth and the projected demand for physicians as far as 1991.[8]

Ironically, 1991 was the year public policy on physician supply began an abrupt shift. That year a report to the Federal/Provincial/Territorial Conference of Deputy Ministers of Health, meeting in Manitoba, by Morris L. Barer and Greg L. Stoddart from the Centre for Health Services and Policy Research at the University of British Columbia, led to dramatic changes in policy on training and licensing new physicians in Canada. Barer and Stoddart's view was that physician supply was outstripping population

growth.[9] It cited the Hall Commission's direction to build new medical schools in Canada as a key factor in the rise in physician numbers.[10]

The Barer/Stoddart report recommended reductions in medical school enrolment and reduced reliance on foreign-trained doctors.[11] The report also said the oversupply of physicians encouraged over-servicing of patients, particularly in urban areas, "where it is widely conceded that there are too many physicians chasing too few patients, and where incomes are dependent on providing individual discrete services." [12] [13] It said a significant amount of doctors' services were either medically unnecessary or ineffective.[14] (A review by the OECD found the theory of "physician-induced demand" to be controversial and the available international evidence to be inconclusive.[15]) Governments in Canada followed the recommendations in the Barer/Stoddart report, reducing medical school enrolments and opportunities for foreign-trained doctors to train and practice here.[16] [17]

Even as governments carried out policies in response to the perceived physician surplus, the scarcity of doctors in rural and remote areas remained a major concern.[18] By the early 1990s less than 12 per cent of B.C. physicians practiced in communities with populations of less than 10,000 while 24 per cent of the population lived in communities that size. Over all, B.C. had 861 people for every physician. But while Greater Vancouver had one general practitioner for every 537 people, the Agassiz-Harrison area, for example, had only one for every 3,096 people. As well, the trend pointed to further reductions in rural physician services: 95 per cent of the 400 or so new physicians applying for billing numbers each year were setting up practice in urban areas; compared to 5 per cent in northern and rural areas. [19]

In response the British Columbia government implemented a combination of incentives and penalties to shift the balance of physicians to rural and under-serviced areas at the same time as it was trying to limit the increase in physician numbers overall. As of 1992/93 incentives and assistance for physicians practicing in remote areas included travel assistance and isolation allowances as well as subsidized and salaried positions.[20] Starting in 1994 the government also brought in penalties. It introduced a measure which held back up to 50 per cent of the regular fee-for-service rate of pay for new physicians if they established practices in "oversupplied areas." This measure was supported by the British Columbia Medical Association. Similar measures were brought in by governments in New Brunswick, Ontario, Quebec and Newfoundland.[21] [22] [23]

The fee reductions met a wall of resistance from the young doctors it targeted, who objected to limits on their professional opportunities. The Professional Association of Residents of British Columbia (PAR-B.C.) and one of the affected physicians successfully challenged the measures in British Columbia Supreme Court. In July 1997 the court ruled that the physician supply measures violated guarantees of mobility and equality in the Canadian Charter of Rights and Freedoms, as well as the Canada Health Act's requirement for reasonable compensation for all insured services.[24] The physician supply measures also instituted mandatory retirement for doctors by rescinding their billing privileges at age 75, but this measure was withdrawn following a legal challenge by the Senior Physicians Society of B.C.[25] [26]

FROM OVERSUPPLY TO SHORTAGE

By the end of the 1990s the view of a general surplus of physicians in Canada had shifted again to concerns about a serious shortage.

In 2002 a report for the Canadian Institute for Health Information examined the question of how Canada's physician workforce went from a perceived surplus in to a perceived shortage within the space of a decade. It cited, in part, the very actions taken in response to concerns about too many physicians in the early 90s, such as cutting medical school enrolment and restricting intake of internationally trained physicians. It also found the unintended consequences of some other policies had an even larger effect in reducing the supply of new physicians.

WHAT HAPPENED TO THE PHYSICIAN "SURPLUS"?

The Canadian Institute for Health Information report found from 1994 to 2000 there were 5,093 fewer new physicians in Canada, compared to the number who would have entered practice if the inflow rate had not dropped.

The biggest factors in reducing physician supply were changes to postgraduate training, accounting for 25 per cent of the drop. Changes included elimination of the one-year postgraduate internship previously required for general practitioners, and replacement with a two-year residency requirement to become a family practitioner. This measure delayed the entry of new doctors into practice by an extra year. In addition, as a higher proportion of medical school graduates opted to become specialists, postgraduate residency training increased to 4 to 7 years and further delayed their entry into full-time practice.[27]

Other major factors were:
- Reductions in positions for foreign-trained physicians, accounting for 22 per cent of the drop in new physicians;
- Increased retirements (encouraged with government retirement incentives and buyout packages) accounting for 17 per cent;
- Downsizing of medical school enrolments, accounting for up to 9 per cent of the decline in new doctors.[28]

Demographic changes among both patients and doctors also affected the physician supply dramatically. These included:
- General population increases;[29]
- An aging population who require more health services than younger people;[30]
- An increase in the proportion of women physicians and physicians over age 65, who statistically work fewer hours and claim fewer billings.[31]

The CIHI report also suggested the perception of a shortage of physicians was due to "hysteresis" - increased patient expectations because of the standard of service that had been available while the ratio of doctors to patients was at its peak in the mid-1990s.[32]

The growing physician shortage wasn't limited to Canada. The 2006 OECD study found numerous countries experiencing physician shortages.[33] Like Canada, other countries faced particular difficulties in recruiting and retaining doctors in remote, rural and disadvantaged areas, and in areas with significant indigenous populations.[34]

British Columbia and other jurisdictions have responded to the shortage in physicians, and particularly rural doctors, with a mix of initiatives including increased training spaces, financial incentives to attract and retain physicians and recruitment of foreign-trained doctors.

FINANCIAL INCENTIVES

The Retention Allowances introduced in 2002 offered incentives to physicians setting up in smaller communities. It rated each community to assess eligibility for extra funding for doctors, based on the number of neighboring physicians and distance from major medical centres.[35] Physicians living and practicing in eligible rural communities received a fee premium of up to 30 per cent on their billings. He or she would also receive a flat sum premium allocated to the community. For example, in 2003 a doctor in Dease Lake could receive up to $31,375 annually under the Rural Retention Program plus a 30 per cent premium on billings. A physician in less-remote but still under-served Oliver or Osoyoos could receive up to $3,774 plus a 4.31 per cent premium top-up.[36]

The Northern and Isolation Travel Assistance Outreach Program (NITAOP) compensated visiting specialists and family practitioners for travel time, travel costs and accommodation when they provided services in isolated communities.[37] In 2007/08 it paid for nearly 3,500 trips.

The Family Physicians for British Columbia (FPs4BC) program, launched in 2007, offered up to $100,000 for each doctor who set up a full-service practice in an underserved location and stayed at least three years. The physician was also required to agree to take on "orphaned" patients who have no doctor of their own and patients needing chronic disease management. The money included up to $40,000 debt repayment and up to $52,000 to supplement income and cover the cost of setting up a new practice.[38] The results of the FPs4BC incentive appeared to be mixed, at least in its first year. A married family physician and general surgeon said the program helped persuade them to set up practice in Port Alberni.[39] Meanwhile, no doctors had taken up the offer for any of the 15 available incentive FPs4BC packages in the Interior Health region as of early 2008.[40] In that region health and town officials were struggling to find replacements after four of the five doctors serving the town of Armstrong and a regional population of 9,000 departed within a three-year period.[41]

Financial incentives are also employed elsewhere in Canada and internationally.[42] New Brunswick recognized the shortage of urban as well as rural doctors with a $25,000 grant to lure family physicians who are new to the province to set up practices in Moncton, Saint John or Fredericton. The grant followed a $50,000 offer to doctors who start a rural family practice in that province. The New Brunswick government also offers

a $25,000 bursary, $15,000 for office expenses and a guaranteed income of $175,000 in a new doctor's first year.[43]

MEDICAL SCHOOL EXPANSION

The B.C. government increased first-year enrolments from 128 seats in 2001 to 256 in total provincial enrolments by 2007[44] [45] It mandated new satellite medical programs at the University of Victoria and the University of Northern British Columbia in Prince George. A fourth campus is slated for the Okanagan. The government also expanded residency positions for post-graduate training, promising to increase those from 128 spaces in 2003 to 256 by 2011/12 when the expanded undergraduate classes will need them.[46] The B.C. government also announced expansion and upgrading of teaching hospitals in locations as remote as Dawson Creek. The expectation is that by providing medical school and internships outside of Vancouver, graduates will stay and establish practices closer to the communities where they were trained.[47] It's an approach supported by research from Australia and elsewhere that found medical students recruited from rural backgrounds or deprived areas tended to return to rural areas to work after graduation.[48] Here in Canada, Alberta medical schools reserve a total of 12 spaces for students from aboriginal backgrounds, rural areas and the North West Territories. Several other medical schools across the country also reserve places for aboriginal students.[49]

Other provinces also increased medical school enrolment and residency positions, with the total reaching 2,542 spaces in medical schools across Canada in 2007/08.[50] The majority are in Ontario, with six medical schools and 843 of those spaces, and Quebec, with 842.[51] Alberta, with more than 400,000 residents lacking a family physician, increased enrolments from 173 in 1999 to 280 for 2007/08.[52] The University of Calgary and McMaster University in Hamilton also sped up the training of new doctors by bringing in three-year undergrad medical degrees, which compressed instruction into three 11-month terms instead of the standard of four nine-month terms.[53] Strategies to encourage rural practice included satellite campuses in Atlantic Canada, Quebec and Ontario and a new Northern Ontario School of Medicine in Sudbury and Thunder Bay.

FOREIGN-TRAINED DOCTORS

International medical graduates (IMGs) are widely seen as part of the solution to physician shortages. They represent about 23 per cent of practicing physicians across the country. Canada has never produced enough of its own medical-school graduates to meet this country's needs for physicians.[54] However the process of bringing doctors from abroad, licensing and keeping them where they're most needed has been fraught with difficulty and delay.

The process is most straightforward for graduates of countries whose medical education programs are recognized as accredited and approved by the College of Physicians and Surgeons of British Columbia. For family physicians those countries include the United States, Australia, New Zealand, South Africa, Ireland and the U.K. [55] The Royal College of Physicians and Surgeons of Canada, which accredits specialists, also recognizes medical programs in Switzerland, Hong Kong and Singapore.[56] Doctors educated in those countries are able to practice medicine immediately upon arrival in B.C., though they are officially practicing under supervision and must complete national examinations within a specified period of time.[57] The B.C. government is among several

provinces which operate an international headhunting service for this group of IMGs.[58] The Health Match BC website promotes opportunities in rural and urban British Columbia and offers assistance with the application and accreditation process. Underserved communities which haven't been able to attract a Canadian doctor make the application for registration with the College of Physicians and Surgeons of British Columbia on behalf of a doctor who's accepted a job offer. The community also submits the application for a temporary work permit. Foreign physicians may apply for permanent resident status after 12 months of work in B.C. [59]

Efforts to recruit doctors from outside Canada have been controversial. In 2001 the South African High Commissioner to Canada called on the provinces to stop depleting the supply of doctors in his country, where the rural regions were under-serviced and sections of some hospitals were forced to close.[60] Many OECD countries now aim for self-sufficiency in educating their own supply of physicians because of ethical concerns. [61]

For foreign-trained physicians from outside the countries on the college's approved list, including Canadians who did their physician training outside this country, the process of obtaining a license to practice is much more uncertain. They must repeat their postgraduate training in Canada to obtain a license, but there are few existing residency positions for the thousands of unlicensed IMGs in Canada.[62] [63]

The B.C. government did triple the number residency positions for IMGs to 18 starting in 2006.[64] Still, the Association of International Medical Doctors of British Columbia says the chances of getting a residency position are remote for most foreign-trained MDs because more than 100 compete for those 18 places each year. The association says British Columbia still has the fewest per-capita IMG residencies in Canada.[65] By comparison the province of Ontario expanded residency positions for IMGs to 100 family practice positions and 100 specialty positions. Alberta has 48 IMG residencies,[66] and Manitoba has 10.[67]

While the lack of training spaces is a sore point for the IMG advocacy organization, the B.C. government has also focused on concerns with the licensing process through the College of Physicians and Surgeons of British Columbia. (While most countries have a single licensing requirement for foreign-trained doctors, Canada's requirements vary from province to province.[68]) The 2008 Speech from the Throne promised new measures to ensure "all qualified health workers can fully and appropriately utilize their training and skills, and not be denied that right by unnecessary credentialing and licensure restrictions."[69] In April 2008 the Health Minister introduced the Health Professions (Regulatory Reform) Amendment Act (Bill 25). The legislation provided for a form of restricted registration that would allow internationally trained doctors to practice on a limited basis. The bill also established a Health Professions Review Board to review registration decisions by professional colleges. The review board is supposed to develop guidelines and recommendations to help ensure registration and other procedures are fair, transparent and impartial.[70]

The move to create an oversight body for self-regulated health professions follows similar legislation in Ontario and Manitoba. In Ontario the government enacted legislation to oversee and standardize registration of professionals, including foreign-trained physicians. The Fair Access to Regulated Professions Act also created an Office of the Fairness Commissioner to ensure compliance by professional regulating bodies.[71]

A year later the province of Manitoba brought in its own Act to regulate the registration of foreign-trained professionals.[72]

The College of Physicians and Surgeons of British Columbia says it can not speed up licensing of IMGs without lowering standards, unless assessment and post-graduate training becomes more widely available for them. The college says it already licenses 100 to 150 IMGs annually, but it says it can't take all medical degrees at face value, as there are wide variations in the quality and scope of medical training in the countries where foreign-trained physicians learned their profession.[73]

ALTERNATIVES

One way of getting physicians into remote locations has been through creation of "Telehealth" services. By 2006 this network reached 125 locations around the province, including, for example, the office of a thoracic surgeon based in Kelowna who could connect with a patient and nurse in a remote location using two-way audio, video monitors for both doctor and patient, and a close-up camera for detailed examinations.[74]

The OECD report on physician shortages described telemedicine as still in experimental stages in some countries where it is being used, and noted that there was little evidence so far on its relative costs and benefits. In addition, use of the technology poses concerns about issues such as protection of privacy and liability insurance coverage. [75]

Since the 1960s, nurse practitioners have been seen as a way to ease the pressure of physician shortages and reduce health care costs, by expanding the role of nurses to include diagnosis, prescription and treatment, through extra training and certification. While many nurses already worked in advanced nursing practice, or nurse-practitioner-like roles, the establishment of legislation and training formalizing the role of licensed NPs in British Columbia has been slow to develop. They were recognized in the Health Professions Amendment Act in 2003, and the province's first class of licensed nurse practitioners graduated in 2005. By 2007, there were 55 licensed nurse practitioners practicing in the province, including a pilot project that funded one position in Vancouver's Downtown Eastside and two in remote Central Coast communities. Meanwhile, provinces such as Ontario and Alberta were already far ahead in employing licensed nurse practitioners: in 2005 Ontario had 653 licensed nurse practitioners and Alberta had 132.[76] A review of advanced nursing practice for the OECD found that opposition by doctors in the United States was a constraint to expanding nursing roles in that country.[77] Here in British Columbia the B.C. Medical Association expressed concern over patient safety, warning that the newly trained nurse practitioners did not appear to have enough training to handle complex medical issues such as adjusting pacemakers, allergy testing and prescriptions without supervision.[78]

In April 2008 the B.C. Government also introduced amendments to the Pharmacy Operations and Drug Scheduling Act that would allow pharmacists limited authority to renew prescriptions without a physician's approval.[79]

MEASURING RESULTS

By 2005 the B.C. government claimed the supply of physicians was improving by most measures. In April 2007 the B.C. Health Minister said the rural physician supply had increased from 1,765 to 1,883, a 6.7 per cent increase. He noted that according to the Society of Rural Physicians of Canada, B.C. had the best rural-urban physician ratio in Canada, with 842 rural residents for each General Practitioner, compared to a nationwide ratio of 1,214 residents per GP.[80] [81] The Rural Retention Program incentives were credited in part for attracting 30 more GPs and 88 more specialists to rural British Columbia between 2003 and 2006.

Province-wide, the Canadian Medical Association said the number of physicians grew by 14 per cent between 2001 and 2007, while the general population of the province grew 6.8 per cent. [82]

The Canadian Institute for Health Information's most recent report presents a somewhat different picture. It reported the over-all increase in the supply of physicians is still slightly behind population growth. The number of physicians in B.C. increased 4.8 per cent from 2002 to 2006, but the population increased 5.0 per cent. Total Physician numbers grew from 8,243 in 2002 to 8,635 in 2006.[83] The ratio of physicians to population didn't change, but remained at 199 physicians for each 100,000 population.

THE CHALLENGES AHEAD

The Society of Rural Physicians of Canada says the "carrot" approach being used by the B.C. government is working better than the penalties of the past to reduce the rural physician gap.[84] However, according to the OECD study, the physician shortage is expected to worsen over the next two decades, and the approaching retirement of a large proportion of physicians is expected to have a profound impact.[85] Physician groups also advise that the pressure to produce more doctors will only increase in coming years.

The Society of General Practitioners of British Columbia told the ministry of Health's "Conversation on Health" in 2007 that 20 per cent of the province's GPs plan to move or retire in the next 5 years.[86] Over the longer term the BCMA and College of Physicians and Surgeons of British Columbia warn that the numbers of new physicians being trained and recruited from abroad will not be enough to make up for population growth, the aging population and the coming wave of physician retirement.[87] They estimate 400-500 doctors a year are needed. At peak enrolment B.C. medical schools will be taking in a maximum of 288 new students. [88] The college says the pressure to train larger numbers of IMGs will further strain a medical education system in British Columbia which is already near breaking point because of the training and supervision load created by the doubling of enrolment in B.C. medical schools.[89]

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