Family medicine training — the international experience

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ABSTRACT

- Family medicine is undergoing dramatic transformation around the world. Its organisation, delivery, and funding are changing in profound ways.
- While the specifics of primary care reform vary, a common emerging strategy involves establishment of primary health care teams that provide improved access, use electronic records, are networked with other teams, and are paid using blended payment schemes.
- More family doctors are needed in all countries. New approaches beyond the traditional apprenticeships or residency programs will be required to meet global demand.
- Training of family doctors must change to prepare tomorrow's family physician for a different practice reality.
- Curricula are more competency-oriented, rather than time-focused.
- Today's trainees can anticipate a career that includes periodic reassessment of their knowledge base and competency.
- This article explores these trends and offers some strategies that have proved effective in various parts of the world for training increased numbers of qualified family doctors.

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The family doctor is the foundation of the most successful health care systems. Depending on the setting, family physicians may be called on to perform major surgery (rural Australia), attend births (Canada), care for patients in hospital (United States), manage multiple chronic conditions (the Netherlands), oversee public health functions (Cuba), or any combination of these. Although there may be differences in specific services provided by individual physicians within and between health care systems, family doctors share two common objectives: a commitment to sustain an ongoing therapeutic relationship with their patients (continuity) and a willingness to address any of their health care concerns or needs (comprehensiveness).

Family doctors' training reflects the diversity of their health care systems and communities. After 3–6 years of medical school, vocational training in family medicine ranges between 2 and 5 years and is structured around one of two basic models: apprenticeship (Europe) and residency practice (North America). In an apprenticeship, the trainee is posted with the practice of one or more experienced family doctors who serve as mentors and trainers while the trainee provides care to those doctors' patients. In a residency practice, a new patient is matched with a trainee who serves as that patient's doctor until the completion of training, when a handover occurs to the next generation of trainees — all while under the supervision of the residency program teachers.

This article uses the terms family doctors, family physicians, general practitioners and primary care physicians interchangeably, and defines these doctors as physicians who are regarded as qualified specialists in family medicine, usually after completing formal postgraduate training in the discipline. It should be noted that in some countries, such as the US, general internists and general paediatricians are also considered primary care physicians.

The changing world of family doctors

Most advanced health care systems depend on family doctors. Compared with more narrowly focused specialists, primary care physicians more effectively improve the equity and outcomes of health services, as well as the health of populations.[1] Even in a system as subspecialist-oriented as the in US, where three out of four doctors are limited-practice specialists, family physicians total more patient visits each year than any other specialist,[2] and are the only physicians distributed geographically in the same proportion as the general population.[3]

However, there are a number of challenges facing family medicine, including rising patient and physician expectations, growing complexity of care, burgeoning technology, expanding knowledge base, shifting resources, changing physician workforce, and wavering student interest. For example, about 30% of Canadian family physicians have a special clinical interest or focused practice (eg, in geriatrics, palliative care, sports medicine),[4] which results inevitably in demands for academic programs and certification in those areas. The increasing feminisation of family medicine — most trainees and younger family doctors in many countries are now women — has required training programs and health planners to make adjustments to workforce assumptions to accommodate the needs of women during the childbearing years. Another challenge is that family doctors in rural and isolated communities typically must possess a wider range of maternity care and surgical skills than those in urban settings.[5]

The challenges facing family medicine are magnified in developing countries, where the limited funds for health care are often devoured by hospital and specialty services in larger cities or by specific diseases, such as HIV.[6] Compounding the problem is the shortage of qualified primary care workers because of limited training capacity and the loss of practitioners through "brain drain" to developed countries.[7,8] In many countries in sub-Saharan Africa, the dearth of qualified health workers means that a single family doctor may oversee the health care needs of a population of 10 000 to 20 000 individuals, making personal continuity with individual patients nearly impossible.[9] In these settings, continuity of care is provided through the management protocols executed by an extended primary health care team.

Even with these challenges, the World Health Organization has concluded that robust primary health care is needed now more than ever, in developed and developing countries.[10] Representing nearly 200 countries, the WHO World Health Assembly adopted a resolution urging member states to "accelerate action towards universal access to primary health care" and "to train and retain adequate numbers of health workers … including … family physicians".[11] The response of family medicine to these challenges and high expectations has been to develop new models of practice and training.

New models of practice

Having adequate numbers of family physicians will depend on practice environments that family doctors find satisfying and

sufficiently remunerative when compared with other career choices. The rising expectations and growing complexity of primary care require new models of practice. Family doctors are aggregated increasingly into multi-physician groups comprised of teams of health care professionals with diverse skills. These teams offer more convenient and dependable access, and provide more comprehensive services.

Changes in practice structure and function are occurring around the world, although the specifics vary from one country — or even one community — to another. In Ontario, Canada, the new models of care are known as family health teams. Patients roster with a family physician, who is part of a group of family doctors who agree to provide extended office hours and access to care 24 hours a day, 7 days a week. Family physicians in such teams are supported with a blended remuneration system, which includes pay for performance and capitation. Funding is provided for other health care professionals, such as nurses, dietitians, pharmacists and mental health workers. Grants are given for electronic medical record implementation. Teams must have a governing board, which can include members of the public. In the US, the modernised primary health care team is described as the Patient-Centered Medical Home (PCMH) and promises improved performance and satisfaction.[12]

Denmark, the Netherlands, Spain and the United Kingdom are considered to have the strongest primary health care systems in Europe, mainly due to reforms aimed at transferring power and tasks to GPs.[13] The associations and colleges of GPs have considerable informal power because their family physician members enjoy professional autonomy as independent contractors, have gatekeeper status, control information through classification and electronic record systems, positively affect national health outcomes, promote social equity, and provide services that have high population satisfaction. In the UK, the National Health Service is built explicitly around the GP, with conscious efforts to integrate and coordinate primary health care services with the other components of the health care system.

As illness patterns in developed and developing countries shift from infectious diseases to chronic conditions, there is increased demand to promote healthier lifestyles and to increase the capacity of primary care practices to offer enhanced preventive, behavioural and mental health services.[14] Depending on the community's needs and available resources, the primary care practices of tomorrow may include traditional healers, community outreach workers, specially trained nurses, exercise specialists, social workers, psychologists and psychiatrists. The trend is to move beyond mere collocation — to integrate these other health care professionals into the fabric of the practice,[15] and incorporate behavioural and mental health screening and assessment into the training and duties of all members of the primary health care team.[16]

New practice models create the need for new payment models that account for the population served through severity adjustment,[17] inspire performance improvement,[18] and provide sufficient resources to assure thriving primary care practices.

New models of training

To maintain sufficient numbers of qualified family doctors, enough students must be attracted to the discipline and provided with quality training. The narrower expectations, ostensibly greater prestige, and better pay of subspecialists have caused fluctuating levels of student interest in family medicine.

Student interest

Initiatives to interest students in careers as family doctors include:

- Nurturing interest in science as early as primary or secondary school, or having these young students shadow a family doctor.
- Selecting students for medical school who are more likely to choose a career in family medicine. Medical students more likely to become family doctors are those who are from a rural background, are older on entry, express an early interest in family medicine, wish to practise in a rural or disadvantaged area, have parents who are less affluent, or prefer clinical practice to research.[19]
- Being mindful that during medical school certain factors predict and influence choosing family medicine, such as
  - early and continued exposure to family doctors throughout the curriculum, along with formal clerkships or rotations in family medicine;[20]
  - the presence of a department of family medicine at the medical school;[21]
  - targeted efforts to identify and cultivate medical student interest in family medicine including early clinical experiences in the preclinical years, such as following an expectant family through pregnancy, birth, and early childhood of the infant;[22]
  - paying students for participation in extracurricular experiences, such as immersion in a family doctor's practice during a break in the school year or assisting an academic family physician with an ongoing research project;
  - creating special tracks for family medicine that weave together curricular, extracurricular, summer, and counselling experiences throughout the medical school continuum;[23]
  - starting special interest groups in medical schools to inform and support students interested in family medicine; and
  - developing loan repayment or scholarship programs for those choosing primary care or practice in underserved areas — students who accumulate high levels of educational debt appear to be less inclined to choose family medicine.[24]
- Bringing students together through family doctor associations at local, state, regional and national levels to promote the discipline and groom future leaders.

Vocational training

There is a trend toward competency-based, rather than time-based, training requirements, with trainees expected to demonstrate certain competencies in order to progress to the next level of training.[25] For example, Denmark established a new general practice training scheme in 2003, which includes 119 competencies to be demonstrated over 5 years of training. Standardised patients, in-training examinations, 360-degree evaluations (in which trainees also evaluate trainers), and the compilation of educational portfolios are becoming commonplace tools to assess and document trainees' competence. The move to work-hour restrictions requires training programs to find the proper balance between continuity of care and the need to hand over care before the onset of trainee fatigue. In the US, the P4 (Preparing the Personal Physician for Practice) Initiative has enabled 14 family medicine residency programs to explore innovative ways to have family medicine residents learn and experience the new model of practice encompassed by the PCMH.[26]

To increase placement of family doctors in more disadvantaged areas, some US residency programs create special training tracks with only a few residents located in the rural or urban practice of

several family physicians, effectively creating a hybrid between apprenticeship and residency program training models. Developing countries have been able to leverage those resources by cooperating-through-training networks such as Primafamed in Africa.[27] Exchange programs, such as the Hipokrates project in Europe, give GP registrars an opportunity to broaden their educational horizons by doing some of their training in another country.[28]

Continuing professional development

Creating a family doctor does not always begin, and certainly does not end, with formal postgraduate training. The most successful health systems plan for between 1000 and 1500 patients per full-time-equivalent family doctor.[1] This translates to 6–10 million family physicians to cover the world's population of over 6 billion, or about 10–20 times the estimated number of currently qualified family doctors; a number that far exceeds the foreseeable output of today's training programs.

Consequently, other approaches to qualifying family doctors are needed, especially in more resource-limited settings. One strategy has been to have trained family doctors mentor community-based physicians and provide a practice pathway to qualification through a structured learning program. Brazil has embarked on an ambitious effort to establish 90 000 family health units to serve its 180 million people while gradually upgrading the qualifications of the unit doctors through such a mentoring program. Another innovation is to qualify community physicians through an online curriculum such as Profam, which was developed in Argentina.[29] Successful case-based supervision and training models have been instituted in Belize, India, and Uganda to improve the mental health skills of primary care doctors.[30]

Once qualified family doctors are established in practice, their participation as preceptors for students or trainees or as contributors to a practice-based research network can increase their satisfaction with, and improve their chances for staying in, the practice. Such participation requires adequate structure and financial support.

Demonstrating continued competence through periodic re-examination, performance measurement, and peer assessment is becoming as or more important than initial qualification. US family doctors have been required to undergo periodic examination to maintain specialty certification as a family physician since the specialty was established in 1969. A revalidation scheme for all UK doctors, including GPs, is scheduled to start in 2012.[31] The most recent US trend is to require evidence of quality improvement in practice as a condition for maintenance of certification.[32]

Conclusions

Policymakers have concluded, and research confirms,[1] that patient outcomes are better when their health care is centred in a positive relationship with a trusted family doctor.

With the maturation of the discipline, a clearer picture has emerged to guide workforce planning for family medicine.[33] The output of family physicians must be increased. Some expanded training capacity can be achieved by increasing the number of trainees in traditional training programs, and expanding existing programs by creating tracks or training networks that reach into smaller practices or more isolated or deprived settings. However, traditional postgraduate training programs will not achieve the numbers of family doctors needed quickly enough. Therefore, mentoring, online curricula, and other innovative strategies must be developed to support practising community physician efforts to become qualified family doctors.

The capacity of generalist practices must be expanded through integrated and effective primary health care teams. Increased reliance on an extended primary health care team will create demand for interdisciplinary training and more integrated and coordinated collaboration.

Competing interests

None identified.

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