Editorial

Quantity and quality in postgraduate medical education: meeting the challenge

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There is a pressing need to determine how quantity affects quality in postgraduate medical education, not only to deal with expected reductions in funded residency positions but also to establish program priorities and take advantage of new program opportunities. The balance between service and education must be addressed and clear policies developed. Other areas that require review and policy development include the contribution of trainees to undergraduate education, the proportion of specialty and subspecialty programs, the role of subspecialty programs in education and service, the role of interuniversity programs, priorities within the medical school and new program development.

Residency numbers

The number of graduates of medical schools in Canada has declined slightly over the past 10 years,[1] and a further decrease of 5% is expected by 1990.[2] The numbers of interns and residents may decline if governments introduce policies to deal with the projected oversupply of physicians. Medical educators and hospital service chiefs continue to be concerned about the number and distribution of postgraduate positions.

Over 80% of the funding of interns and residents in Canada is provided by the provincial ministries of health. From 1982 to 1987 the overall change in the numbers of government-funded positions was negligible, whereas the number of positions funded by other sources doubled.[3] During the same period the number of Canadians in training increased by 10%, and the number of trainees who were landed immigrants or in Canada with a work visa decreased slightly.[4]

Discussions are under way about increasing the mandatory period for prelicensure training in several provinces. Substantial efforts are being made to increase the number of positions available in family medicine residency programs, and the number of residency programs in subspecialties continues to increase. These three factors should be viewed in the context that nearly all first-year postgraduate positions are funded by the provincial ministry of health,[5] that most family medicine residents are Canadian graduates and occupy ministry-funded positions,[6] and that almost all fellows in specialties and subspecialties have funding that is not from the ministry,[7] and nearly 60% of them are in Canada with employment visas.[4]

Over the years most medical services in teaching hospitals have depended on the patient care provided by interns and residents. However, as the services change, increase in number and become more complex a greater demand is placed on trainees. Hospitals today have a limited ability to assign to other professionals activities traditionally performed by house staff.

Medical schools may approach a decrease or realignment of funded positions by simply prorating any decrease across all programs, thereby appearing fair to all and avoiding difficult and quasipolitical decisions. This approach may also leave the number of trainees in small programs below the critical mass. Some medical schools may arbitrarily assign the bulk of the reduction to larger programs. Both approaches disregard the quality and strength of some programs and the need to support other programs in the corporate interest of the medical school.

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A better approach uses quality, strength, importance and manpower demand as the criteria for allocating funded trainee positions. This approach permits the development of new programs and the strengthening of others. Positions can be assigned on an educational basis in combination with the service needs of the teaching hospital. As a result some programs may be eliminated, and the provision of services by interns and residents may be substantially altered.

Medical educators are attempting to link clinical service activities with educational objectives and are placing more emphasis on ambulatory care and community-based experience. Conflicts arise when house staff are assigned to service activities rather than to educational activities that improve their knowledge and skills. In the extreme, deficits in knowledge and skills may not be identified because the pressures of service steer the trainee away from the comprehensive educational program, and opportunities for scholarship and research may be compromised.

Service and education

Pervading all these discussions is the balance between education and service.[8] Medical schools and their affiliated teaching hospitals must devise a uniform approach to residency programs. Faculty members, medical staff and trainees hold divergent views on education and service, which results in uncertainty and conflict and makes comprehensive educational programming difficult. If the concept of a clinical teaching unit (CTU) is worth preserving, either the number of CTUs must be reduced or trainees must be diverted from other settings to the CTU. The educational support of the undergraduate program, especially the clerkship, and the interdependence of postgraduate programs are important in considering the number and type of CTUs. In many programs the issue is not too few trainees but, rather, too many CTUs.

As the number of trainees assigned to a program is reduced, either by lack of funding or by an increase in educational opportunities, it becomes more likely that trainees will be assigned to roles of little direct relevance to their education. Furthermore, house staff may be given patient care responsibilities in which they have limited or no expertise. Increasing demand for service activities combined with expectations of higher academic performance may produce additional stress.[9]

Trainees as teachers

Interns and residents play an important role in undergraduate education. Residents teach clinical skills to medical students and provide immediate and ongoing supervision of clinical clerks. Many conduct formal teaching sessions and are involved in evaluating medical students. Presumably all of these functions must continue, but with fewer house staff greater demands will be placed on faculty members. To ensure a high-quality educational experience for both students and resident-teachers, the teaching commitment of interns and residents should be more clearly defined. Faculty members must remain responsible for the quality of instruction.

Challenge and opportunity

Even without a reduction in the numbers of trainees the strains in our current system inhibit us in attempting innovative approaches and in attaining excellence in postgraduate education. Changing patterns and emphasis in health care demand the development of new programs or significant alteration of current programs. Regulation of the hours worked by house staff will add to the strains.[10]

Some residents may need additional knowledge and skills to practise in rural or remote areas. Therefore, programs should be flexible in terms of content and allocation of funded positions. Medical schools should consider this legitimate need in their negotiations with governments.

It is imperative that medical schools develop a policy for change and realignment. Attempts at such change without a clear statement of faculty priorities and policy leads to piecemeal, stop-gap, poorly coordinated change with significant potential for an overall decline in the quality of postgraduate medical education.

Two or more universities could work closely together to develop conjoint or interuniversity residency programs in subspecialties with few residents. However, little benefit is realized unless a program is phased out at one university and consolidated at another, and a reciprocal arrangement is made for another program. The net result should be two strengthened residency programs with output comparable to that before amalgamation.

Residency programs in subspecialties contribute to undergraduate and postgraduate education but are not essential for internships, family medicine programs or major specialty programs. The absence of a subspecialty program in a given discipline does not imply that services are not provided to the community, that undergraduate education is not available, that there is no training for interns and residents in core programs or that active research cannot occur. Some subspecialty residency programs may need to be phased out to generate a sufficient number of residency positions to support core residency programs, family medicine programs and existing or new programs that capitalize on new areas of priority and strength within the medical school. Medical schools need to coordinate their activities to ensure an adequate supply of subspecialists.

Faculty members must reconcile the reduction

be strengthened greatly by clear and comprehensive policies that promote postgraduate medical education of the highest quality while considering the problems of quantity.

References

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in specialty residents' contributions to service and teaching by reorganizing their own time to meet these commitments. This will not be easy and will require innovation, cooperation and support from the medical school. The roles of nonphysician health care professionals and physicians contracted to provide specified clinical services must be expanded accordingly.

Most medical schools have areas of special interest and strength. We must coordinate and integrate efforts to support and build up the areas of strength. Well-established research and graduate programs are important factors to be considered in maintaining or expanding residency programs and developing new programs.

In the face of a static or reduced number of residency positions medical schools need to identify a program's priorities and emphasis in order to reallocate training positions to new and innovative postgraduate programs. This need has been well illustrated in interdisciplinary programs (e.g., critical care medicine and clinical pharmacology) and comprehensive programs (e.g., neurosciences and oncology).

Medical schools will likely continue to press ministries of health for policies that will ensure an appropriate number of internship and residency positions. As well, it behoves them to address vigorously issues related to the allocation of trainee positions. The position of medical schools would