

# Physician resource planning in an era of uncertainty and change

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## Résumé

ON A ACCORDÉ BEAUCOUP D'ATTENTION ces dernières années à l'établissement de la meilleure méthode d'estimation des effectifs médicaux nécessaires. La stratégie fondée sur les besoins décrite dans ce numéro par le Dr Noralou P. Roos et ses collègues (page 1215) représente une amélioration importante par rapport aux évaluations subjectives. Il se peut toutefois que les stratégies fondées sur les besoins et la demande ne tiennent pas entièrement compte de l'impact que des changements fondamentaux de la prestation des soins de santé risquent d'avoir sur la demande de médecins. L'analyse comparative est une autre façon possible de procéder, où l'on compare l'offre de médecins dans une région donnée à celle d'une région où elle est considérée comme optimale. Il reste toutefois à déterminer l'impact que la réforme des soins de santé aura sur nos attentes à l'égard de l'offre de médecins.

**H**ealth care systems around the world are under immense pressure to change. The developing world struggles to balance access to primary care and the control of infectious diseases with other demands on scarce resources. In developed countries there is a pressing need to contain growth in the health care sector; the aging of the population, the emergence of new and costly diseases such as HIV/AIDS, and the explosion of technology and other factors have led to steady increases in health care spending. Many countries, including Canada and the US, are experiencing the confusing confluence of service overutilization in certain areas and populations, and severe access problems in others.

Along with the US and other developed nations, Canada is struggling to find ways to contain rising health care costs while maintaining or improving quality of care and access to health services. Broadly speaking, health care systems have attempted to deal with these conflicting pressures in 1 or 2 ways: through market-based economic strategies aimed at changing the incentives within the system, or through regulation. In the former domain are such schemes as privatization and competition, capitation and a variety of managed-care approaches. Public-policy or regulatory approaches include controlling the supply, specialty mix, and practice locales of physicians; reducing the capacity of the health care system (for example, by closing hospital beds); reducing the public funding available to physicians; reducing medical school enrolment; and implementing a variety of public and semi-public health planning functions (e.g., through district health councils and regional health authorities). As policy issues relating to the physician workforce are addressed, the question of regulation versus market forces persists.<sup>1</sup>

Depending upon one's perspective, physicians may be viewed as the "cost drivers" and principal contributors to unnecessary care and the waste of resources, or as the players best able to enhance access to underserved areas and improve health outcomes in a population. Given these extreme and unrealistic perspectives, it is no wonder that so much energy has been put into determining the optimal supply of physicians, and, once such determinations are made, finding the combination of market-based or regulatory pressures most likely to achieve the desired goal. In addressing the issue of physician workforce planning it is important to understand the limitations of physician numbers alone as a determinant of population health outcomes. However, given the substantial direct and indirect public financing of physician training and practice, an understanding of workforce requirements is essential for public accountability.



## Editorial

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*Can Med Assoc J* 1997;157:1227-8

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Determining the optimal number of physicians for a given population is an imprecise science. Any modelling of future health care needs must include “crystal ball” adjustments that take into consideration new and anticipated trends in health care delivery (e.g., new payment systems that may alter demand for certain specialties) and in society at large (e.g., younger physicians wanting to spend more time with their families).<sup>2</sup>

Various approaches have been used to determine the number of physicians needed in a particular area. Needs-based planning uses expert panels to estimate the number of physicians needed per capita to treat the diseases managed by a particular specialty.<sup>3</sup> An adjusted needs model is a modification of this; it takes into consideration the fact that some illness does not require the services of a physician, and that only a fraction of all illness can be expected to be identified and managed by health care providers.<sup>2</sup> Demand-based planning uses current utilization patterns as an indicator of future workforce requirements and typically ignores the evidence that, in noncapitated markets, an increased supply of medical resources leads to increased demand and utilization. (This is explained in part in terms of supplier-induced demand or the hypothesis that physicians adjust their practices to reach a target income.<sup>4,5</sup>) The main drawback common to these approaches is that they may not fully take into account the possibility and implications of fundamental change in the health care system. From a plethora of studies on future physician supply needs in the US, there emerged virtually no signal of the current high demand for primary care physicians and physician substitutes, and the accompanying reorientation toward primary care of many specialists.<sup>6</sup> Similarly, there was no indication that the US would require additional infectious disease specialists and researchers to cope with the unforeseen and devastating epidemic of HIV/AIDS.

An alternative to needs- and demand-based planning — benchmarking — compares the present physician supply in a given area with that in other geographic regions or in organized health care systems with distinctive staffing patterns.<sup>7</sup> Benchmarks typically used in the US have been geographic areas with high managed-care penetration, or Health Maintenance Organization physician panels that arguably have developed a highly efficient and high quality mode of service delivery. This approach assumes that the chosen benchmark staffing levels are optimal and represent high quality and efficiency. Traditional approaches to workforce planning assume that the environmental factors used to assess current needs are relatively stable and can be used to forecast future needs. In the benchmarking approach this assumption of stability does not hold. Geographic areas or health care systems that are seen as representing “the future” of health care

are deliberately selected as benchmarks; in the US, planners typically select capitated systems. Ideally, one would select systems whose staffing levels maximize efficiency while maintaining quality and access.

In this issue Dr. Noralou P. Roos and colleagues (page 1215) apply a needs-based approach to estimating the number of physicians required in Manitoba. This approach is certainly an improvement over impressionistic estimates based on arbitrary physician–population ratios. Most important, perhaps, is that this approach establishes quantitative models to forecast supply; this is a substantial improvement over earlier “soft” evidence about surpluses and deficits. This in turn should lead to more concerted efforts at controlling supply.

The question remains, however, as to how the continued evolution of the health care system in Manitoba and elsewhere in Canada will affect physician supply and demand and physician behaviour. Will the marketplace assume a more prominent role in health services delivery and, if so, will this produce incentives to increase the demand for physician substitutes? Will adjustments to payment systems make the cost-effectiveness of generalist physicians versus specialists so pronounced that we redefine our assumptions about the need for different types of physicians?

The point is that we need to consider the validity of past behaviour as a predictor of future behaviour, particularly in a period when the rules are changing so dramatically in many areas. Although we clearly require strong evidence to inform our decisions, it must be recognized that this evidence exists in an environment of uncertainty and change.

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