

## Chapter 5.21

# Economic Efficiency and the Canadian Healthcare System

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### ABSTRACT

In this chapter the authors examine the compatibility of the objectives of universality and public funding which are two important pillars of the Canadian healthcare system, with the objectives of cost effectiveness and more generally economic efficiency. The authors note that under some very innocuous conditions, markets and other economic based mechanisms such as second price auctions are characterized by economic efficiency and cost effectiveness. For the particular case of healthcare, some additional features that must be considered in the design of the mechanism are that healthcare services and products are valuable if, when taken together they constitute the components of a needed procedure, and otherwise they are worthless to the individual; and timely completion of procedures is what is valued, delays and waiting not only prolong suffering but may eventually prove to be more

costly to the system if the condition worsens. They recommend a market-based mechanism, encompassing these features, that utilizes mobile agents representing patients and their medical needs. In order to incorporate the basic goals of universality and public funding, the agents will participate in virtual auctions using a needs based ranking as the currency for making bids.

### INTRODUCTION

A universal, publicly funded healthcare system, such as the one in Canada, has many attractive features that have general appeal. The belief that healthcare is a basic necessity, which must be provided by the state for all the citizens, is the underlying principle for universality. Public funding ensures that all people, no matter how wealthy or poor, can rely on the government for their healthcare needs.

The system has been a source of great pride for Canadians, and a reason for envy by other nations.

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For decades, it has served the Canadian people well in taking care of their health needs in a timely fashion and without a large financial burden. However, recent times have witnessed some dissatisfaction as the Canadian population is beginning to age and health costs have burgeoned. The costs, that have throughout been creeping upward, have now threatened to overtake the budget and the system has responded by lengthening waiting lists. In the case of some procedures the waiting lists have reached such proportions that patients are needlessly suffering by prolonged waiting, during the course of which, their conditions have often worsened, at times to the point where they must be treated on an emergency basis. Indeed, many patients have contracted further complications in addition to their original illness, and in rare cases died from the complications. Allowing the patient to worsen generally has irreversible implications on treatment, and ultimately on outcomes; quite perversely, it can also increase the total cost of treatment for the patient, further aggravating the budget problem of healthcare provision. This escalation of both cost and suffering for the patient could have been prevented had the patient been treated in a timely fashion.

In effect, the much touted public healthcare system is now forcing Canadians to accept a compromised level of service by requiring protracted waiting followed by late treatment, and possibly at higher cost. This is certainly not fitting of a world class standard of care, and it is certainly not what was envisioned by the founders that first drafted this policy.

In trying to find solutions, three main strategies arise, and ideally, all three strategies should be used in forming and maintaining the best healthcare programs. The first and most obvious is to increase the budget. This has proven to be quite difficult when taxpayers are already burdened with fairly high taxes. Nevertheless, a somewhat higher budget does seem inevitable in the present situation. Indeed, it should be expected that supplying healthcare for an aging population, should cost

more. However, in the future, such demographics should be anticipated. A scheme should be instituted whereby rather than burdening the current work force of younger individuals with the large healthcare costs of the top heavy aging cohort, the healthcare system avoids periods of crisis and recovery as the population demographics swing from aging to youthful populations. To achieve this steady cost for healthcare, a fund must be developed which would accumulate a total for each person summing to the average expected lifetime healthcare costs. An important part of developing such a system would be to have access to accurate data on average lifetime health costs, and to be able to make accurate predictions of future average lifetime health costs.

Another direction is to reduce the demand for healthcare by urging the public to adopt healthier lifestyles. There are certainly many initiatives being taken in this direction by both private individuals and organizations, as well as through Canadian public policy. There is currently greater awareness in the general public about maintaining a healthy active lifestyle than ever before. The government has also been promoting healthy living through massive advertising campaigns and economic incentives, such as preferential tax treatment or deductions for the cost of children's fitness participation. However, these are long horizon initiatives, and the benefits of these efforts in terms of improved health and lower medical costs will only be realized much farther in the future.

Finally, there is the strategy of ensuring that, given the limited budget that does exist for healthcare, it is allocated in a manner that achieves the maximum benefit at the lowest possible cost. In this chapter we will focus on this last strategy. This is not to say that the other two directions are not worthwhile, but rather that we do not expect to see much immediate relief by utilizing them, although they definitely have a necessary role in the proper long term functioning of a carefully crafted healthcare program.

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