

# FRASER FORUM

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## CRITICAL ISSUES BULLETIN

### ***Waiting Your Turn: Hospital Waiting Lists in Canada***

***Second edition***

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Joanna Miyake  
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# FRASER FORUM

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## Preface

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Michael Walker

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**T**HE FRASER INSTITUTE HAS published three books dealing with Canada's health care system.<sup>1</sup> While each author approaches the subject from a different perspective and from a different analytical orientation, all are concerned with the impact the economic arrangements regarding health care have on the quality and quantity of health care services delivered to Canadians.

The Fraser Institute has long had an analytical interest in the health care system and in providing information about it to those concerned about public policy. This interest was particularly piqued several years ago by the discovery by one of the authors that in the United Kingdom, local governments actually produced publications listing hospital waiting lists as a guide for health care consumers. In effect, waiting is now a method for rationing health care in the U.K.

About the same time, anecdotal evidence began to emerge suggesting that hospital waiting lists were beginning to become significant in Canada. Previous Institute studies had found that a lengthy waiting list was one way state-sponsored medical care systems controlled overall cost when faced with high demand volumes generated by the non-existence of pricing. The current *Critical Issues Bulletin* is the Institute's second attempt to document the extent to which queuing or waiting lists are being used as a means of adapting to the conflict between limited budgetary allocations and unlimited demand for free health care.

The study, conducted by Professor Steven Globerman and myself, with the assistance of Joanna Miyake and Lorna Hoyer, has been enthusiastically supported by the Fraser Institute, but the work undertaken by the authors has been independently conducted. The

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<sup>1</sup> Åke Blomqvist, *The Health Care Business* (1979), Ronald Hamowy, *Canadian Medicine, A Study in Restricted Entry* (1984), and Malcolm C. Brown, *Caring for Profit*, (1987).

views expressed in this study, therefore, may or may not conform with the views of the members and trustees of the Fraser Institute.

The Institute is pleased to offer the results of the research to the public

for consideration and debate in the hope that more attention will be focused on the issue of hospital waiting lists and on improving our measurements of and knowledge about this aspect of health care provision in Canada.

## Waiting your turn: hospital waiting lists in Canada

Michael A. Walker, Joanna Miyake,  
Steven Globerman, and Lorna Hoye

### Introduction

**T**HE ORGANIZATION, MANAGEMENT and funding of health care systems is becoming an increasingly important public policy issue in North America, as well as in other developed countries. Indeed, health care "reform" is a prominent subject of debate among candidates for the 1992 Presidential elections in the United States, and the Canadian health care system has been proposed by some prominent Americans as an improvement upon the current U.S. system.

While the Canadian system has been lauded by some, others have pointed to a perceived growing need to ration access to medical services, particularly to surgical procedures, as a major shortcoming. Critics of the Canadian health care system point to the "underprovision" of hospital services, particularly those requiring new technologies, as evidence of the

need either to increase government funding of the health care sector, or to introduce new institutional arrangements to promote conservation of resources in this sector. With continuing large deficits constraining the ability of governments to fund public services, a growing number of Canadians are beginning to question the wisdom of maintaining the status quo approach toward universal access.

One manifestation of the rationing of health sector resources in Canada are waiting lists for medical procedures and treatments. To the extent that non-price rationing of hospital capacity is occurring, monetary and non-monetary costs may be borne by users of the Canadian health care system that are not explicitly recognized as costs associated with operating the system. These unrecognized costs may include, for example, lost work time, decreased productivity associated with physical impair-



ment and anxiety and physical and psychological pain and suffering.

Both policy analysts and hospital administrators are increasingly sensitive to the waiting time issue. Possibly reflecting this increased sensitivity, patients in Ontario and British Columbia have been sent to hospitals in neighbouring states in the United States for specific treatments. Also, an increasing number of provincial health ministries are collecting hospital waiting list data for purposes of internal management, although these efforts have been fairly modest to date.

A number of health sector administrators have expressed scepticism about the utility and meaningfulness of waiting lists. This scepticism relates to both the relevance of waiting lists as an indicator of the performance of the health care sector and the reliability of such data as a measure of the extent of rationing of health care services. In an earlier publication, we evaluated various theoretical issues related to hospital waiting lists, including their relevance as measures of "excess demand."<sup>2</sup> That discussion defended the proposition that waiting lists are a

potentially important dimension of performance in the health care sector. It also provided estimates of waiting lists for a set of hospital procedures in British Columbia.

This report builds upon our earlier study by updating waiting list estimates for British Columbia and expanding the number of provinces surveyed to include Manitoba, New Brunswick, Newfoundland and Nova Scotia. The relevant theoretical issues are reviewed here, notwithstanding that they are extensively discussed in our earlier published study.

### **Waiting lists as measures of excess demand**

The most straightforward interpretation of hospital waiting lists is that they are indices of excess demand for medical treatments performed in hospitals. As such, they represent the substitution of "non-price" rationing of scarce resources for rationing by price. The rationing, in this case, takes place through enforced waiting for the available capacity to perform a given treatment or procedure.

<sup>2</sup> See Steven Globerman with Lorna Hoyer, "Waiting Your Turn: Hospital Waiting Lists in Canada," *Fraser Forum*, May, 1990.

Economists generally believe that non-price rationing is less efficient than rationing scarce resources through the price system. In particular, prices are efficient mechanisms for signalling the relative scarcity of any good or service, thereby encouraging both producers and consumers to modify their behaviour accordingly. Thus, a rise in price occasioned by an increase in the demand for a particular medical procedure causes some health care users to be deterred—effectively rationing the existing supply. The price rise also sends out the signal that not enough health care is being supplied. Assuming that the price rise makes additional profits possible, there will be an increase in the supply of health care as suppliers change their behaviour to take advantage of the new profit possibility. This supply response does not necessarily occur if waiting is the system of rationing employed.

Non-price rationing is also inefficient because it obscures differences in intensities of demand across different sets of consumers. To the extent that some consumers desire a given product more than other consumers, strict non-price rationing might result in those consumers who desire the product less actually obtaining it. All other things constant, efficiency is promoted when

those consumers who most value a product obtain it.

At least two prominent qualifications can be raised about the social inefficiencies of rationing by waiting. One is a claim that many procedures and treatments are performed where the social costs outweigh the social benefits. (The reasons suggested for this condition are discussed below); however, even if true, it would still be more efficient to discourage the consumption of a given amount of medical services by price rationing rather than by non-price rationing, unless one is prepared to argue that patients will pay any price to receive specific treatments and that government bureaucrats are better able to determine whether treatment is warranted at any cost of providing it. A second and, in our view, more relevant qualification is that non-price rationing of a vital product such as medical services is fair and is perceived to be fair by society.

To the extent that fairness is itself a desirable attribute of the economic system, one might argue that non-price rationing provides collective benefits that outweigh the inefficiencies identified above; however, depending upon how the non-price rationing occurs, the resulting distribution of income



may not be any improvement upon the pre-existing distribution of income. An example of this is the relatively high percentage of rent-controlled apartments in some North American cities held by upper-income professionals.

Another qualification to the fairness argument is the potential for providing direct cash transfers to poorer people to enable them to compete in the marketplace for any specific good or service. The argument against direct subsidies is that it is easier to target subsidies in-kind to appropriate recipients. In the context of health management, one would presumably want to subsidize lower income people needing health care services; however, given the unexpected nature of many illnesses or accidents, it might be quite difficult to identify these people before the fact. Furthermore, given the potential for catastrophic illness and the associated high costs of treatment, some amount of direct subsidization might have to be extended to large portions of the population and not just low-income groups. In this case, the deadweight efficiency losses associated with the tax-transfer process might not be significant-

ly different from those associated with transferring income in-kind through non-price rationing.

To take the analysis a step further, the government might consider subsidizing purchases of private health care insurance by lower-income individuals and families, thereby indirectly "targeting" health care assistance. The subsidy could be geared to a family's ability to pay, so that it could approximate the full cost of the insurance premium for some buyers. At the same time, prices would be relied upon to "clear" the market for medical services.

To be sure, there are many arguments that have been made both for and against private medical insurance systems.<sup>3</sup> For purposes of this report, we accept that the public provision of and payment for health care services is an institutionalized feature of Canadian society for the foreseeable future, and that extensive use of market pricing mechanisms to ration scarce capacity is unlikely. Under these circumstances, the extent of any excess demand, as well as how that excess demand is rationed, are relevant public policy issues, since

<sup>3</sup> These are considered in *The Fraser Institute book, The Health Care Business*, by Åke Blomqvist, 1979.

the social costs associated with non-price rationing should conceptually be set against whatever benefits are seen to be associated with non-price rationing.

### *Potential forms of non-price rationing*

There are several possible ways in which non-price rationing of health care services might take place. One is by Canadians substituting private medical services for available public services, specifically by going outside the country for health care. Provincial health care plans only cover emergency medical services outside of Canada, and then only to the amount that such services "cost" in Canada. Of course, given sufficient incentives, Canadians would presumably seek to buy private insurance for non-emergency medical treatment outside of Canada, much as they currently buy supplementary private insurance to cover out-of-country emergency treatment.

In fact, private insurers currently do not offer non-emergency U.S. medical insurance to non-U.S. residents, although there is no legal restriction against them doing so. In discussions and correspondence with representatives of the U.S. insurance industry, we were told that there was simply insufficient

demand for such insurance. This view was confirmed by our 1990 survey of British Columbia specialists which found that less than 1% of patients of British Columbia specialists ever inquired about treatment in another country. At the least, therefore, Canadians typically have found it cheaper to endure waiting for treatment in Canada than to buy access to immediate medical treatment elsewhere.

A second way in which non-price rationing might take place is through lobbying or bribing the "gatekeepers" of the hospital system. In particular, individuals who are personal friends or close acquaintances of surgeons, hospital administrators or politicians in positions of power may obtain preferred positions on the queue for medical services; however, given the relatively close attention paid by the media to the health care issue and the risks of sanctions attached to being caught, this is unlikely to be a widespread and persistent practice. Moreover, no evidence has emerged to date which provides a basis of support for this concern.

A third approach is for physicians to ration access by implicitly or explicitly rejecting candidates for medical treatment whom they

would otherwise treat. In the absence of explicit criteria, doctors might be expected to reject those candidates least likely to suffer morbid consequences from non-treatment or those whose life expectancy would be least improved by treatment; however, the British experience suggests that some doctors use a foregone present value of earnings criterion for selecting patients for early treatment, thereby giving lower priority to critically ill patients.<sup>4</sup>

It is unlikely that medical practitioners would acknowledge that they are rejecting (as opposed to queuing) specific patients who in their medical judgment are unwell, so it would be difficult to identify this behaviour if it was, in fact, occurring. In this regard, there is no persuasive evidence that morbidity rates in Canada are increasing significantly owing to a failure to provide medical services.

Waiting for treatment is another form of non-price rationing, and it is arguably the most relevant manifestation of excess demand for health care in Canada. Social costs

associated with increased time spent waiting for treatment are primarily associated with prolonged pain, anxiety, physical disability, and the inconvenience of being unable to schedule treatments when the patient's opportunity cost of time—that is, the highest value the patient attaches to his or her time—is low. Tangible and intangible costs associated with hospital waiting lists therefore include reduced productivity, greater expenditures (than are perhaps optimal) on preventative health care and personal safety, and reductions in the affected individual's quality of life.

#### *Real social costs of rationing health care*

Observers who argue that hospital waiting lists are not a particularly important social issue believe that waiting lists tend to be inaccurate estimates of rationing and/or that there is little social cost associated with enforced waiting in any case.

One frequently expressed concern is that doctors encourage a greater demand for medical care than is

<sup>4</sup> See Henry J. Aaron and William B. Schwartz, *The Painful Prescription: Rationing Hospital Care*, Washington: D.C.: The Brookings Institution, 1984. The experience of Canada's largest cancer treatment centre suggests that doctors are giving priority for radiation treatment to people whose cancers may be curable. See Christie McLaren, "Cancer Patients Face Wait For Treatment," *Globe and Mail*, September 13, 1989, A1.

socially optimal. As a result, waiting lists exist for specific treatments. However, there may be no significant social costs associated with rationing since many (perhaps most) individuals on waiting lists are not in "legitimate" need of medical treatment. In a related version of this argument, doctors are suspected of placing a substantial number of patients on hospital waiting lists simply to exacerbate a public perception of a health care crisis so as to increase public funding of the medical system.

The available evidence on the magnitude of supplier-induced demand for medical services is, at best, ambiguous. In support of a view that this is a modest problem is the argument that competition among physicians will promote a concordance between the physician's interests and those of the patient. General practitioners usually stand as agents for patients in need of specialists. Specialists carry out the bulk of hospital procedures. General practitioners who can mitigate medical problems while sparing patients the pain and discomfort of hospital treatments are more likely to be perceived as doing a good job than those who encourage short-term or long-term hospitalization as a cure. This suggests that general practitioners have an incentive to direct patients

to specialists who will not "over-prescribe" painful and time-consuming hospital treatments.

Placing excessive numbers of patients on hospital waiting lists may also have direct costs for opportunistic specialists. For example, the latter may come to be seen as using a disproportionate share of hospital resources. This may make it more difficult for them to provide quick access to those resources for patients who are in more obvious (to themselves and their general practitioners) need of hospital treatment. Similarly, patients facing the prospect of a relatively long waiting list may be tempted to search out other doctors with better connections to hospital facilities.

As an additional consideration, there is no necessary reason for any single physician or group of physicians to believe that individual physician waiting lists will significantly affect government funding policies or that they will be net beneficiaries of any increased funding that does occur. In the face of obvious incentives to "free-ride" on the strategic behaviour of other physicians, there may be no significant bias for physicians to inflate hospital waiting lists or even to over-report the number of patients they have waiting for admission to hospital.



A potentially more important qualification to the argument that hospital waiting lists are associated with significant social costs is the possibility that a significant portion of waiting is voluntary. Specifically, some customers for medical treatments and procedures may actually place a higher value on future treatment than on present treatment of specific health problems. For example, present treatment may involve forgoing income and other benefits that exceed the expected costs associated with delaying treatment. It may, therefore, be optimal for an individual to delay treatment until some point in the future when his or her opportunity costs of time are expected to be lower. In fact, results from a survey we conducted of specialists indicate that most waiting for hospital treatments is involuntary.

A related concern is that hospital waiting lists are biased upward by a failure of reporting authorities to identify individual patients listed by more than one doctor and/or a failure to prune waiting lists of individuals who have either already received the requested treatment or who, for some reason, are no longer likely to require treatment. Our survey results suggest that doctors generally do not believe that their patients have been booked on waiting lists by other physicians.

Moreover, the possibility exists that would-be patients increasingly anticipate being made to wait indefinitely for hospital admission and postpone or forgo "marginal" visits to their physicians which, on the margin, reduces the number of patients entering queues.

It is, in any event, important to mention that persistent waiting lists do imply that people who, in some physician's judgement, need health care are not receiving it. Less health care may be delivered in the system than would be delivered if the price were allowed to adjust to changes in demand.

In summary, while there are hypothetical reasons to expect that hospital waiting list parameters will overstate true excess demand for hospital treatments, the magnitude of any resulting bias is unclear and might be relatively small given countervailing factors that may reduce measured amounts of waiting.

### **Hospital waiting list survey**

In order to develop a more detailed understanding of the magnitude and nature of hospital waiting lists in Canada, the authors of this study conducted a survey of specialist physicians. Specialists were surveyed rather than hospital ad-



ministrators because a substantial number of hospitals either do not collect waiting list data in a systematic manner or do not make such data publicly available.

This year the survey was conducted in two western provinces and three Maritime provinces. We hope that a Canada-wide survey will be possible later in 1992. The provinces surveyed were British Columbia, Manitoba, Newfoundland, New Brunswick and Nova Scotia. A comparison of these provinces is offered at the end of this year's survey results as well as a comparison between the 1990 survey of British Columbia and this year's survey. The provincial medical associations of each province surveyed gave valuable assistance by providing mailing lists of specialists, help and information. This assistance indicates concerns about growing waiting lists for surgical and diagnostic procedures. Quite clearly, the medical profession has a collective interest in promoting an increased flow of financial and other resources to the health care sector, and this interest was certainly a factor encouraging the medical association's co-operation in the project. Nevertheless, it should not be assumed that the survey results are therefore unreliable. In particular, it should not be assumed (for reasons suggested earlier) that

individual physicians responding to the survey have a strong incentive to skew their responses in a particular direction.

Survey questionnaires were prepared for ten different medical specialties: plastic surgery, gynecology, ophthalmology, otolaryngology, general surgery, neurosurgery, orthopaedics, cardiology, urology, and internal medicine. For the 1990 survey, each questionnaire was pre-tested on a sample of individual member specialists serving on the relevant BCMA specialty committee. The final versions of the questionnaires were mailed to physicians in each specialty. A comparable questionnaire to that used in 1990 was mailed to specialist physicians in our five sample provinces. Survey data were collected in British Columbia and New Brunswick between January and May 1991, in Newfoundland and Manitoba between July and September 1991 and in Nova Scotia between October and November 1991. The authors chose to survey specialists rather than general practitioners since the former have primary responsibility for health care management of surgical candidates. In all provinces except B.C. the survey was sent to all specialists. In B.C. the population of specialists was large enough in several specialties to send sur-

veys to only a random sample. Fifty percent of gynaecologists, ophthalmologists, and orthopedic specialists, were surveyed. For general surgery and internal medicine, 33 percent of all specialists were surveyed.

Table 1 shows the number of questionnaires mailed out for each specialty and the number of usable responses received, by province. The response rate was considered acceptable for research purposes in all provinces. Unfortunately, there were no responses from otolaryngologists in Newfoundland, despite a follow up. In specialties where the response rate is 100 percent, such as from cardiologists in the Maritime provinces, we found there was a master waiting list for operations in that specialty. Such lists exist only when there are just a few specialists in the province, and they perform all surgeries at one hospital. In the Maritime provinces, populations and distances are small enough that all cardiac surgery is centralized at one hospital and is performed by a few surgeons.

### ***Survey results***

The major findings from the survey responses are summarized in tables 2 through 11. These tables report the average waiting time and the

estimated number of patients waiting for a sample of treatments in each of the specialties identified. It should be noted that the treatments identified for consideration represent a cross-section of common procedures carried out in each specialty. They were suggested by the BCMA specialty boards in 1990.

In tables 2 through 11, the first column identifies the specific treatment. The second set of columns reports the estimated number of patients waiting for each treatment by province and the third set of columns reports the average time waited by patients in each treatment category by province. The average waiting time per patient is calculated from the survey responses. The estimated number of patients waiting in the province for a given treatment is derived using the average weeks waited and Statistics Canada's Health Report No. 82-003s2 "Surgical Procedures and Treatments 1988-89." This report provides a count of the total number of surgical procedures performed annually by province. To estimate the number of individuals waiting for the surgery at any given point, we divided the average weeks waiting for a given operation by 52, and then multiplied this number by the total number of persons undergoing this operation annually. Thus a waiting period of,

say, one month implies that on average, patients are waiting one twelfth of a year's total capacity to get their surgery. In other words, for the next person entering the list, there are one twelfth of a year's patients ahead of them in the queue. The main assumption underlying this estimate is that the number of surgeries performed will neither increase nor decrease annually in response to waiting lists. As the total number of operations performed in Canada has actually decreased by 4 percent between 1985-86 and 1988-89, despite indications that waiting lists have been increasing, this would appear to be a fairly safe assumption.

The 1990 estimations of the number of people waiting for treatment in B.C. were extrapolated from the physicians' responses to a query concerning the number of patients they had waiting. There were problems with this methodology: while the variance in the responses concerning waiting times was fairly low, the variance in responses concerning the length of the queue was high. This would indicate that while waiting list lengths vary substantially, physicians' access to surgical facilities is positively related to the number of patients they have waiting. Hence, the time it takes to process patients is comparable

across all specialists. In this situation the reported average time waited would appear to be fairly reliable, whereas concerns exist about the reliability of reported numbers of patients waiting.

By matching the surgical operations polled in our study with their equivalents in the Statistics Canada report, we estimated the expected number of people undergoing a given surgical procedure annually by province. The latest year for which the Statistics Canada report was available was 1988-89. As indications are that the number of surgical procedures are changing only very slightly from year to year, the annual reports for 1988/1989 are considered valid estimators for 1991.

A number of minor problems were encountered while matching Statistics Canada operation categories to the ones reported in our survey. In several instances in our survey an operation such as rhinoplasty was listed for more than one specialist. In these cases, average waiting times were identified with the classification of the responding specialist. Hence, the flow or number of patients annually undergoing this type of operation is divided between specialties according to the proportion of specialists in each area. In one instance, three opera-



tions polled in our study—ptosis, entropion/extropion and blepharoplasty—did not have exact matches to Statistics Canada categories, though they all seemed to fall under the Statistics Canada category “operations on eyelids.” Therefore the waiting times for these operations were pooled. And finally, one orthopaedic operation polled in our study, “Removal of Pins and other hardware” had no match in the Statistics Canada report. Accordingly, we made no estimate of the number of patients waiting for this operation.

Tables 12A and 12B offer a comparison of average waiting times and the estimated number of patients waiting across specialties and provinces. Of course, our calculation of the estimated number of patients waiting in each specialty includes only those patients waiting for operations surveyed. The 50 operations we surveyed represent between 55 and 62 percent of non-emergency surgery performed in the provinces we studied.

To estimate the number of people waiting at any time for non-emergency surgeries that were not included in our survey, we first found an average wait for surgery in each province. This is a weighted average, calculated by summing the products of the average special-

ty waiting and the proportion of polled surgery associated with each specialty. These weighted averages are reported in table 12A as the average wait for residual operations. The residual operations are all nonemergency operations that were not included in our survey. The estimate of residual waiting is the product of the residual number of operations and the weighted average divided by 52. The estimation of total residual waiting is reported in table 12B as is the estimation of total patients waiting in each province at any given time.

To estimate the number of people waiting for non-emergency surgery at any time in Canada, we first found the quantity of non-emergency surgery performed in the five provinces not surveyed, then multiplied this flow by an estimate of the proportion of the year that Canadians can expect to wait on average for surgery. This latter figure is derived by summing the product of the provincial averages described earlier and the proportion of non-emergency surgery done in each province surveyed. Thus the larger provinces, such as B.C., carry more weight than the smaller provinces. Using this methodology we find that the total estimated number of people waiting for surgery during 1991 was

260,721 or 1.0 percent of the population in Canada.

Several general observations may be made about tables 1 through 12. The first is that residents of all provinces surveyed are waiting significant periods of time for hospital treatments. While some treatments have short waits, (such as gynecological procedures in Manitoba with a wait of less than a week, and colonoscopies in Nova Scotia with a wait as short as one week) most procedures require waits of at least a month. For some procedures, the waiting times can be as long as two years. The average time waited for an operation varies considerably between specialties within a province, but appears fairly uniform within a specialty.

Results from our survey also reveal several potential sources of influence on reported waiting lists. One is the possibility that individual patients might be on more than one waiting list. To clarify this issue, respondents were asked to identify what percentage of their patients might have been placed on a waiting list by another physician. Given the potential for physicians to have incomplete knowledge of this situation, the reported results must be interpreted cautiously. However, the consensus response is unambiguous—between 70 and

80 percent of respondents report no duplicate bookings of patients on waiting lists. The remaining respondents report that only one to two percent of their patients may be on other physicians' waiting lists.

Another possibility noted in an earlier section is that a proportion of patients are on waiting lists voluntarily. We attempted to measure the magnitude of this phenomenon by asking our survey respondents what percentage of their patients were waiting because they wished to postpone or delay treatment. Again, the responses are quite consistent, although they vary somewhat across specialties. The percentage of patients reported to be waiting voluntarily ranges from 0.4 percent in the case of internal medicine to 9 percent in the case of plastic surgery. Apparently voluntary waiting does not significantly mitigate the relevance of hospital waiting lists as measures of excess demand.

### **Comparison with other survey results**

It would be instructive to compare results from our survey of doctors with other surveys employing different methodologies. However, at the present time most provincial ministries of health do no regular data collection on queues for hospi-



tal procedures. Nonetheless, we were able to find four independent surveys of hospital waiting lists done in Canada in recent years.

In 1982, the Ontario Medical Association undertook a survey of its members in seven surgical specialties.<sup>5</sup> The results were based on the responses of 836 specialists from a total of 2,100 surgeons surveyed. Given the differences in wording of the Ontario survey and our own, differences in the precise treatments identified, and so forth, comparisons between the two surveys are problematic. We did identify 24 treatments for which average waiting times in the two surveys could be compared. In B.C., 15 treatments had waiting lists that exceeded those for comparable Ontario treatments by at least two weeks. Manitoba had 16 treatments that exceeded the Ontario waiting list, New Brunswick had 12 treatments, Newfoundland also had 12 treatments and Nova Scotia had 11 treatments, all exceeding the Ontario waiting list.

In orthopedic surgery all provinces had waiting lists that exceeded the

average found in the Ontario 1982 study by at least a month. Plastic surgery was another area where waiting times were considerably longer than those recorded in the OMA study. Our findings suggest that either waiting times in other parts of the country are longer than those in Ontario or that all waiting lists including Ontario's have become longer since 1985.

A brief survey of Ontario hospitals undertaken in October 1990 for the General Accounting Office of the United States Government<sup>6</sup> suggests that patients waiting for elective orthopedic surgery were waiting from 8 1/2 weeks to 51 weeks, that elective cardiovascular patients were waiting one to 25 weeks and that elective ophthalmology patients were waiting 4.3 to 51 weeks. Limited as this survey was it still suggests that average waiting times in Ontario have probably increased considerably over the last five years, particularly in orthopaedic surgery where the 1985 average waiting time was between three and seven weeks, depending on the operation.

<sup>5</sup> See Gene O'Keefe, "Survey of Waiting for Elective Surgery," *Ontario Medical Review*, November 1982.

<sup>6</sup> General Accounting Office, Human Resources Division, *Canadian Health Insurance: Lessons for the U.S.*, 91-90, June 1991, Report to the Chairman of the Committee of Government Operations, House of Representatives.

A more recent (1989) survey of teaching hospitals across Canada<sup>7</sup> determined the average wait for inpatient surgery for three elective procedures: hip replacements, coronary artery bypass operations and cholecystectomies. Results were based on 48 responding hospitals. This study is particularly useful as a comparison because it reports the average waits according to region. In the West, on average, the longest wait was for coronary artery bypass (168 days), followed by hip replacement (145 days) and cholecystectomies (99 days). Our results for B.C. and Manitoba find considerably shorter waits for coronary bypass surgery (Manitoba: 77 days, B.C.: 84 days) and slightly shorter waits for cholecystectomy (Manitoba: 87 days, B.C.: 70 days). Our results indicate an equivalent wait for hip replacement surgery in B.C. (145 days) and a much longer wait for this procedure in Manitoba (293 days). However, the lengthy Manitoba wait is biased by the reply of one physician who performs this type of surgery exclusively and has a waiting list of 110 weeks. Possibly patients are expressing a preference for this

specialist's services by waiting longer for his services than they would have to for another physician.

In the Atlantic provinces, our study indicates considerably longer waits for hip replacements, coronary artery bypass operations and cholecystectomies in Nova Scotia and Newfoundland than Jacob and Hart found. In contrast, the New Brunswick average wait for these three operations is reasonably close to the Jacob and Hart Atlantic averages. Possibly by including Prince Edward Island in our study, we would have had similar averages to the Jacob and Hart study. Alternately, it is possible that conditions in the Maritimes have worsened considerably in the last two years.

As a general rule, governments and their agencies do not collect data on waiting lists. An exception was the 1967 survey of British Columbia hospitals done by the British Columbia Hospital Insurance Service, the forerunner to MSA.<sup>8</sup> (This study was undertaken primarily to project bed needs in the future.

<sup>7</sup> see Philip Jacobs and Warren Hart, *Admission Waiting times: A National Survey*, February 1990. Average wait time is defined as the time between the specialist's application for the patient's admission and the point of hospitalization.

<sup>8</sup> Pallan, Paul, *A study of hospital waiting lists*, Research Division, British Columbia Hospital Insurance Service: Department of Health Services and Hospital Insurance.

Data is thus presented for individual hospitals and regions and does not lend itself to direct comparison with our study.) However, some general comments can be made. Surprisingly, the time waited for surgery appears to be about the same as it was 24 years ago. In 1967, waiting times reported ranged from two to 300 days with an average time of about five weeks, though this figure varies substantially between hospitals. The main difference between patients waiting today and those in 1967 is that today's patient is more likely to be classified as urgent. The 1967 study found that 93 percent of patients in their sample population were waiting for elective surgery, 7 percent for urgent and 0.5 percent for emergency. In contrast, figures made available to us by Vancouver General Hospital for 1988 suggest that 76 percent of the patients waiting are classified as elective and 24 percent are classified as urgent.

The other major difference between the 1967 survey and today's is the number of patients waiting. The Hospital Insurance study estimated that in 1967 the total number of people on hospital waiting lists in British Columbia exceeded 12,000—0.6 percent of the population in B.C. that year. Our estimate of 40,405 people waiting for surgery in B.C. represents 1.24 per-

cent of the population in 1991. This is a fairly large increase over two decades and certainly indicates a worsening of the situation.

These comparisons support both the accuracy of our results and the conclusion reached in last year's study that the estimated number of patients waiting and average waiting time for most surgical procedures are increasing.

### **Comparison between provinces**

Ranking the provinces studied according to the weighted averages reported in table 12A and described earlier indicates that the longest wait for surgery occurs in Manitoba and the shortest in Newfoundland. Nova Scotia had the second longest weighted average. New Brunswick and British Columbia had the shortest average waits. Overall there was only a two week difference between the shortest and the longest weighted averages. Therefore, comparing the average length of time waited for given treatments between provinces gives a fuller picture. The difference between the shortest wait and the longest wait for a given surgery between provinces is, in most cases, less than five weeks. Table 13 presents a time frequency distribution of the operations sur-

veyed. In all provinces the wait for most operations is less than three months. The difference between the Maritime provinces and the western provinces is the number of operations that fall into the six months or greater category. The operations in this category arise in two specialties—plastic surgery and cardiology. In Newfoundland, Nova Scotia and New Brunswick the waiting time for plastic surgery is extensive for some operations, which probably indicates a shortage of plastic surgeons in these provinces. In all the Maritime provinces studied, except New Brunswick, the average wait for cardiac surgery is greater than six months. The worst example is Newfoundland where the average wait for a bypass is 52 weeks.

In New Brunswick, the average wait for cardiac surgery is the lowest of the five provinces polled. However, since New Brunswick has just acquired the capacity to perform open heart operations, it is likely that at least some of the waiting for these services in other provinces is from New Brunswick patients, and that the waiting lists in New Brunswick itself are not representative of the underlying situation.

This brief analysis suggests that the differences in waiting times be-

tween provinces are specialty specific. A more detailed analysis of the data might reveal other province-specific differences that could lead to policy review.

### **Comparison with last year's results**

As this is the second consecutive year this survey has been undertaken in British Columbia, a comparison can be made between this year's results and last year's. Last year's results reported here are not exactly the same as those published in last year's publication, *Waiting Your Turn; Hospital Waiting Lists in Canada*. In the current study, estimates of the number of patients waiting is made using the methodology described earlier as opposed to the 1990 estimation method. The results are compared in table 14.

Overall there was a reduction in the number of weeks waited and the number of patients waiting. The total estimated number of patients waiting in British Columbia for the surgeries we surveyed was down from 31,063 in 1990 to 17,204 in 1991, an overall reduction of 45 percent.

The overall reductions in the waiting times and waiting list in this 1991 survey are probably the result



of our 1990 survey picking up unusual backlogs in hospital caseloads which were at least partially attributable to the 1989 nurses' strike. However, British Columbia's provincial government did spend \$547 million more on health care in the 1990/1991 budget than they did in the 1989/1990 budget period—a real, after-inflation increase of 5.2 percent. Furthermore, the reductions in waiting numbers and times have not been universal which indicates that not all the differences identified between the two years are the result of last year's data being affected by the nurses' strike. Although the average waiting time is down for all specialties except orthopaedic and internal surgery, the average waiting times have not decreased in a uniform manner across the specialties. For instance, the average waiting time for general surgery has dropped by 83 percent or 19.91 weeks, while the average waiting time for plastic surgery has dropped only 10 percent or 1.5 weeks, and the average waiting time for orthopaedic and internal procedures has increased.

## Summary and conclusion

The 1992 "Waiting Your Turn" survey indicates that substantial waiting for health services is a reality in Canada—an indisputable indicator that rationing is taking place. Interestingly, in 1985, 35 years after Britain instituted nationalized health care, 1.3 percent of their population were waiting for surgery. In 1991, twenty-three years into Canada's institution of a nationalized health care policy, 1.0 percent of the population is estimated to be waiting for surgery. It has been suggested that the U.K. waiting lists are biased upward by the fact that physicians who practice both in the National Health Service and the private hospital system may have an incentive at the margin to have rather longer waiting times for their NHS patients in order to encourage people to take refuge in the private hospital system where physician's fees are higher. Because this private option is not available in Canada, it is not a source of bias in the Canadian data. The plausibility of our reported results for the Canadian waiting experience is therefore enhanced by the close comparability to the U.K. numbers.



**Table 1**  
**Summary of responses**

Specialty	Number of Questionnaires					Number of Responses					Rate (percent)				
	B.C.	Man.	N.B.	Nfld.	N.S.	B.C.	Man.	N.B.	Nfld.	N.S.	B.C.	Man.	N.B.	Nfld.	N.S.
Plastic Surgery	40	10	9	2	8	10	1	3	1	1	25	10	33	50	13
Gynecology	61	58	33	26	43	14	8	6	7	15	23	14	18	27	35
Ophthalmology	66	29	23	16	37	11	6	5	4	9	17	21	22	25	24
Otolaryngology	62	21	17	6	23	13	4	5	0	4	21	19	29	0	17
General Surgery	59	85	65	33	90	10	13	9	3	11	17	15	14	9	12
Neurosurgery	22	6	6	2	7	5	2	1	2	2	23	33	17	100	29
Orthopedics	50	35	21	18	23	12	6	5	4	6	24	17	24	22	26
Cardiology	12	7	2	2	2	4	2	2	2	2	33	29	100	100	100
Urology	56	21	22	6	21	11	4	4	4	3	20	19	18	67	14
Internal Medicine	102	161	64	73	145	14	23	9	11	23	14	14	14	15	16
<b>Totals</b>	<b>530</b>	<b>433</b>	<b>262</b>	<b>184</b>	<b>399</b>	<b>104</b>	<b>69</b>	<b>49</b>	<b>38</b>	<b>76</b>	<b>20</b>	<b>16</b>	<b>19</b>	<b>21</b>	<b>19</b>

**Table 2**  
**Waiting list characteristics for plastic surgery**

Treatment	Estimated number of patients waiting in each province					Average number of weeks waited per patient				
	B.C.	Man.	N.B.	Nfld.	N.S.	B.C.	Man.	N.B.	Nfld.	N.S.
Mamoplasty	409	13	68	208	426	18.7	12.0	26.7	104	66.0
Neurolysis	119	51	83	—	45	9.8	12.0	26.7	—	12.0
Blepharoplasty	21	2	—	104	6	10.7	6.0	—	76	20.0
Rhinoplasty	273	59	110	702	42	15.9	12.0	64	108	20.0
Scar Revision	161	39	142	14	48	12.9	12.0	64	8	16.0
Hand Surgery	231	99	25	—	93	10.9	12.0	9	—	24.0
<b>Totals</b>	<b>1,214</b>	<b>263</b>	<b>428</b>	<b>1,028</b>	<b>660</b>					

**Table 3**  
**Waiting list characteristics for gynecology**

Treatment	Estimated number of patients waiting in each province					Average number of weeks waited per patient				
	B.C.	Man.	N.B.	Nfld.	N.S.	B.C.	Man.	N.B.	Nfld.	N.S.
D & C	440	121	151	192	99	5.8	3.2	7.2	5.9	4.9
Tubal Ligation	158	349	82	39	41	8.9	15.1	11.0	6.2	6.3
Hysterectomy	1,129	429	612	211	69	8.5	11.1	15.0	6.1	13.0
Vaginal Repair	68	15	34	8	43	9.7	6.2	15.0	5.3	13.6
Tuboplasty	337	317	25	5	90	13.6	37.3	6.0	1.8	21
Laparoscopy	47	24	17	9	24	6.7	6.7	8.7	6.4	6.0
<b>Totals</b>	<b>2,179</b>	<b>1,255</b>	<b>921</b>	<b>525</b>	<b>366</b>					

**Table 4**  
**Waiting list characteristics for ophthalmology**

Treatment	Estimated number of patients waiting in each province					Average number of weeks waited per patient				
	B.C.	Man.	N.B.	Nfld.	N.S.	B.C.	Man.	N.B.	Nfld.	N.S.
Cataract Removal	1,366	658	279	45	606	12.2	21.6	7.8	4.4	13.0
Operations on Eyelids	94	9	3	5	6	7.5	3.0	2.0	5.5	4.3
Lacunal Duct	81	19	2	11	14	16.5	15.3	5.0	7.7	7.0
Strabismus	82	24	5	9	36	16.5	30	5.0	3.5	11.8
<b>Totals</b>	<b>1,623</b>	<b>710</b>	<b>289</b>	<b>70</b>	<b>662</b>					

**Table 5**  
**Waiting list characteristics for otolaryngology**

Treatment	Estimated number of patients waiting in each province					Average number of weeks waited per patient				
	B.C.	Man.	N.B.	Nfld.	N.S.	B.C.	Man.	N.B.	Nfld.	N.S.
Myringotomy/ Tonsillectomy/ Adenoidectomy	1,212	439	286	—	199	10.1	10.5	7.7	—	6.5
Tympanoplasty	139	40	19	—	35	11.0	10.0	7.3	—	10.1
Rhinoplasty/ Septal Surgery	603	94	23	—	149	17.8	9.0	7.3	—	25.0
Nasal Polyps	223	78	35	—	202	9.1	9.0	6.3	—	17.0
<b>Totals</b>	<b>2,177</b>	<b>651</b>	<b>363</b>	<b>—</b>	<b>585</b>					



**Table 6**  
**Waiting list characteristics for general surgery**

Treatment	Estimated number of patients waiting in each province					Average number of weeks waited per patient				
	B.C.	Man.	N.B.	Nfld.	N.S.	B.C.	Man.	N.B.	Nfld.	N.S.
Hernia Repair	743	698	114	119	269	5.3	13.4	2.7	5.5	5.3
Cholecystectomy	638	580	112	188	276	5.8	12.4	3.0	6.8	6.0
Breast Biopsy	41	27	6	4	13	2.4	3.0	1.3	2.0	2.0
Mastectomy	64	15	6	—	18	1.3	1.3	0.8	—	1.2
Hemorrhoidectomy	92	123	24	34	42	3.7	13.0	3.5	13.0	5.5
Colonoscopy	43	14	14	—	28	3.4	3.2	2.3	—	4.0
Varicose Veins	72	62	24	38	30	3.6	10.9	3.9	12.5	5.0
<b>Totals</b>	<b>1,693</b>	<b>1,519</b>	<b>300</b>	<b>383</b>	<b>676</b>					

**Table 7**  
**Waiting list characteristics for neurosurgery**

Treatment	Estimated number of patients waiting in each province					Average number of weeks waited per patient				
	B.C.	Man.	N.B.	Nfld.	N.S.	B.C.	Man.	N.B.	Nfld.*	N.S.
Neurolysis (Peripheral Nerves)	32	20	50		25	4.6	8.0	24.0	—	7.5
Intervertebral Disc Surgery	497	199	14		199	4.6	12.0	1.0	—	8.0
Elective Cranial Bone Flap	79	100	0		14	3.3	11.5	0	—	2.0
<b>Totals</b>	<b>608</b>	<b>319</b>	<b>64</b>	<b>60</b>	<b>238</b>					

\*The three neurosurgeons practising in Newfoundland all appear to rely on the hospitals to book their surgeries. The bookers at the Jane Way Medical Centre and the Health Science Centre, the only two hospitals that perform neurosurgery in Newfoundland, were able to tell us that in September 1991, approximately 60 patients were waiting on average 8 weeks for surgery. They were unable to break these estimates down to specific operations.

**Table 8**  
**Waiting list characteristics for orthopaedic surgery**

Treatment	Estimated number of patients waiting in each province					Average number of weeks waited per patient				
	B.C.	Man.	N.B.	Nfld.	N.S.	B.C.	Man.	N.B.	Nfld.	N.S.
Meniscectomy	260	105	61	57	18	11.8	14.25	13.3	17.7	11.7
Removal of Pins	—*	—*	—*	—*	—*	13.2	10.0	13.0	17.3	22.5
Arthroplasty (hips)	1,674	594	174	84	321	27.3	41.9	16.5	19.3	20.0
Arthroplasty (Interphalageal)	583	135	69	115	104	21.2	16.0	13.0	17.7	13.0
Digital Neuroma	289	166	37	11	—	13.7	20.0	13.0	4.0	—
Rotator Cuff Repair	46	22	15	10	23	10.8	17.6	16.0	17.6	17.6
Osteotomy	479	220	171	112	342	12.0	15.5	18.0	24.0	28.0
Hollus Valgus / Hammer Toe	101	18	16	2	20	15.2	22.0	13.0	17.0	31.0
<b>Totals</b>	<b>3,432</b>	<b>1,260</b>	<b>543</b>	<b>391</b>	<b>828</b>					

\*This category did not have a match in the Statistics Canada Report, "Surgical Procedures and Treatments 1988-89, no. 82-003s2." Thus, we could make no estimate of the number of patients waiting for this procedure.

**Table 9**  
**Waiting list characteristics for cardiology**

Treatment	Estimated number of patients waiting in each province					Average number of weeks waited per patient				
	B.C.	Man.	N.B.	Nfld.	N.S.	B.C.	Man.	N.B.	Nfld.	N.S.
Coronary Artery Bypass	669	298	60	70	200	12.3	11.0	10.0	52.0	26.0
Other Open Heart Surgery	209	28	3	20	100	16.5	8.0	10.0	33.0	26.0
<b>Totals</b>	<b>878</b>	<b>320</b>	<b>63</b>	<b>90</b>	<b>300</b>					



**Table 10**  
**Waiting list characteristics for urology**

Treatment	Estimated number of patients waiting in each province					Average number of weeks waited per patient				
	B.C.	Man.	N.B.	Nfld.	N.S.	B.C.	Man.	N.B.	Nfld.	N.S.
Prostatectomy	99	16	31	47	145	13.9	6.0	15.0	5.2	6.1
TUR Bladder	190	41	52	11	29	5.3	7.0	7.8	3.5	3.8
Cytoscopy	361	54	294	27	264	8.6	6.8	14.5	5.3	12.5
Hernia / Hydrocoele	1,477	279	649	112	347	11.6	7.0	20.7	6.8	6.9
Bladder Fulguration	192	12	48	2	131	10.3	6.3	8.7	3.5	3.8
<b>Totals</b>	<b>2,319</b>	<b>402</b>	<b>1,074</b>	<b>199</b>	<b>916</b>					

**Table 11**  
**Waiting list characteristics for internal medicine**

Treatment	Estimated number of patients waiting in each province					Average number of weeks waited per patient				
	B.C.	Man.	N.B.	Nfld.	N.S.	B.C.	Man.	N.B.	Nfld.	N.S.
Colonoscopy	146	23	25	14	11	4.3	2.9	2.1	2.3	1.0
Angioplasty	660	45	—	37	35	8.0	2.7	10.0	2.3	0.8
Gastroscopy	275	88	103	38	171	4.3	4.6	2.9	2.0	4.1
<b>Totals</b>	<b>1,081</b>	<b>156</b>	<b>129</b>	<b>89</b>	<b>217</b>					

**Table 12A**  
**Survey of Physicians, 1991—Average Weeks Waited by Specialty**

Specialty	British Columbia (1991)	New Brunswick (1991)	Newfoundland (1991)	Manitoba (1991)	Nova Scotia (1991)
Plastic Surgery	13.2	36.2	37.0	11.0	26.3
Gynecology	8.4	10.9	5.3	9.0	9.6
Ophthalmology	11.6	5.2	2.9	12.8	10.7
Otolaryngology	12.2	7.2	N/A	7.0	14.7
General Surgery	4.0	2.5	8.0	8.2	4.0
Neurosurgery	4.2	8.3	9.0	10.5	5.8
Orthopedics	15.8	14.6	18.5	20.6	19.7
Cardiology	14.0	10.0	42.6	14.7	26.0
Urology	8.3	13.2	5.0	6.7	7.1
Internal Medicine	5.5	4.5	2.2	3.3	2.0
Residual	8.7	8.7	7.7	9.7	9.1

**Table 12B**  
**Survey of Physicians, 1991—Estimated Patients Waiting by Specialty**

Specialty	B.C. (1991)	N.B. (1991)	Nfld.	Man. (1991)	N.S. (1991)	Canada
Plastic Surgery	1,214	428	1,028	263	660	
Gynecology	2,179	921	525	1,255	366	
Ophthalmology	1,623	289	70	710	662	
Otolaryngology	2,177	363	N/A	651	585	
General Surgery	1,693	300	383	1,519	676	
Neurosurgery	608	64	60	319	238	
Orthopedics	3,432	543	391	1,260	828	
Cardiology	878	63	90	320	300	
Urology	2,319	1,074	199	402	916	
Internal Medicine	1,081	129	89	156	217	
Residual*	23,201	725	1,913	4,351	5,223	
<b>Total</b>	<b>40,405</b>	<b>4,899</b>	<b>4,748</b>	<b>11,206</b>	<b>10,671</b>	<b>260,721**</b>

\*Residual waiting: Estimated number of people waiting for operations not covered by survey

\*\*Estimated total for Canada



**Table 13****Frequency distribution of wait times by province**

Wait time	B.C.	Man.	N.B.	Nfld.	N.S.
0-4 weeks	6	7	13	10	8
1-2 months	11	11	10	13	15
2-3 months	16	15	7	0	4
3-6 months	15	13	16	10	14
6-12 months	—	2	—	1	5
over 1 year	—	—	2	3	1

**Table 14**  
**British Columbia comparison of surveys**

Specialty	Provincial Estimate of Total Patients Waiting		% Change	Average Wait (weeks)		% Change
	1991	1990		1991	1990	
Plastic Surgery	1,214	1,291	-6	13.2	14.7	-10
Gynecology	2,179	3,759	-42	8.4	14.8	-43
Ophthalmology	1,623	2,275	-29	11.6	17.2	-33
Otolaryngology	2,177	3,421	-36	12.2	20.9	-42
General Surgery	1,693	8,590	-80	4	23.9	-83
Neurosurgery	608	1,974	-69	4.2	14.2	-70
Orthopedics	3,432	2,663	-29	15.8	13.2	20
Cardiology	878	1,558	-44	14	23.8	-41
Urology	2,319	5,226	-56	8.3	25.6	-68
Internal Medicine	1,081	306*	—	5.5	3.1	44*

\* Angioplasty not included

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