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Preface

This *Critical Issues Bulletin* is the Institute's tenth attempt to document the extent to which queues for visits to specialists and for diagnostic and surgical procedures are being used to control health care expenses. When we began producing waiting-list measures in 1988, there was anecdotal evidence that hospital waiting times were becoming significant. However, there were no systematic measurements of the extent of waiting.

At that time, partial waiting-list measurements made by hospitals and government departments were viewed as politically sensitive and were not made generally available. While these official waiting lists are now more readily accessible, they are still incomplete, meaning that there are no comprehensive measures other than those produced by The Fraser Institute by which to measure the length of waiting lists in Canada.

The contents of the survey have been corroborated to the extent possible by recourse to other sources of

information. In particular, copies of the preliminary drafts of the study were sent to all of the provincial ministers of health for their comments, as well as to provincial cardiac and cancer agencies.

Measurement is crucial to understanding how any system works; where a system contains problems, it is the key to finding solutions. Largely as a result of the intense public interest in our past publications, waiting lists are now a component of any serious debate on the health care system in Canada. We hope that this interest in waiting lists continues and that Canadian policymakers begin to consider seriously the implications of queuing as they design alternatives to our present health care arrangements.

While this study and its widespread distribution has been enthusiastically supported by The Fraser Institute, the work has been independently conducted and the views expressed may or may not conform to those of the members and trustees of The Fraser Institute.

Executive Summary

Despite improvements in two provinces, in Canada as a whole, waiting time for surgical and other therapeutic treatments remained long in 1999, according to The Fraser Institute's 10th annual waiting list survey, the only comprehensive nationwide assessment of hospital waiting time. Total waiting time between referral from a general practitioner and treatment, averaged across all 12 specialties and 10 provinces surveyed, rose from 13.3 weeks in 1998 to 14 weeks in 1999. This nationwide deterioration reflects waiting-time increases in eight provinces, while concealing decreases in waiting time in Manitoba and Ontario.

Among the provinces, Manitoba achieved the shortest total wait in 1999, 11.2 weeks, with Ontario (11.8 weeks) and Quebec (12.4 weeks) next shortest. Conversely, Saskatchewan exhibited the longest total wait, 34.5 weeks; the next longest waits were found in Newfoundland (19.5 weeks) and Prince Edward Island (18.8 weeks).

The first wait: Between general practitioner and specialist consultation

For Canada as a whole, the rise in total waiting time between 1998 and 1999 concealed a decrease in the first segment of waiting, between visiting a general practitioner and attending a consultation with a specialist. This waiting time fell from 6 weeks in 1998 to 5.6 weeks in 1999. Five provinces shortened this first segment of waiting: Manitoba, New Brunswick, Nova Scotia, Ontario, and Prince Edward Island. The shortest waits for specialist consultations were experienced in Manitoba (4 weeks), Quebec (5.3 weeks), and British Columbia (5.4 weeks). The longest waits for specialist consultations occurred in New Brunswick (7.6 weeks), Newfoundland (7.5 weeks), and Alberta (7.4 weeks).

The second wait: Between specialist consultation and treatment

Waiting time between specialist consultation and treatment—the second stage of waiting—increased, however, for Canada as a whole between 1998 and 1999, rising from 7.3 to 8.4 weeks. The increase in this Canada-wide average reflected the fact that this second segment of waiting rose in 8 of 10 provinces between 1998 and 1999. This second segment of waiting did not diminish for any province, and remained constant in Ontario and British Columbia. The shortest specialist-to-treatment waits were found in Ontario (6 weeks), Nova Scotia (6.8 weeks), and Quebec (7.1 weeks), while the longest such waits existed in Saskatchewan (28.9 weeks), Prince Edward Island (12.6 weeks), and Newfoundland (12 weeks).

Waiting by specialty

Among the various specialties, the shortest *total* waits (i.e., between general practitioner (GP) appointment and treatment) existed for medical oncology (4.5 weeks), general surgery (7.5 weeks), and internal medicine (8.8 weeks). Conversely, patients waited longest between a GP visit and treatment for orthopaedic surgery (24.6 weeks), ophthalmology (19.3 weeks), and plastic surgery (18.7 weeks). Breaking waiting time down into its two components, there is also variation among specialties. With regard to *GP-to-specialist* waiting, the shortest waits are found in medical oncology (2.5 weeks), radiation oncology (3 weeks), and general surgery (3 weeks), while the longest waits are for ophthalmology (11 weeks), neurosurgery (10 weeks), and both orthopaedic and plastic surgery (8 weeks each). Finally, for *specialist-to-treatment* waiting, patients wait the shortest intervals for urgent cardiovascular surgery (1.3 weeks), medical oncology (2 weeks), and general surgery (4.5 weeks), and wait longest for orthopaedic surgery (16.6 weeks), plastic surgery (10.7 weeks), and elective cardiovascular surgery (10.5 weeks).

“Reasonable” and actual waiting times compared

In addition to *actual* waiting times for care, specialists are also surveyed as to what they regard as clinically “reasonable” waiting times. While these values by themselves do not reflect the state of actual waiting time, they can usefully be compared with actual waits. The comparison made is between reasonable and actual *specialist-to-treatment* waiting times for all 10 provinces and 13 specialist categories (both urgent and elective cardiovascular surgery are included); it reveals that out of the 121 cases (some comparisons were precluded by missing data), actual waiting time exceeded reasonable waiting time in 83 percent of them. Averaged across all specialties, Nova Scotia and New Brunswick came closest to meeting the standard of “reasonable” in that their actual specialist-to-treatment waits only exceeded the corresponding “reasonable” values by 44 and 46 percent, respectively, smaller gaps than in the other provinces. This partially reflects, of course, higher standards as to what is “reasonable” in a number of other provinces, such as Ontario, Quebec, and Newfoundland. Among the specialties, “reasonable” was most often met or bettered for urgent cardiovascular surgery and medical oncology.

Waiting for diagnostic and therapeutic technology

The growing waits to see a specialist and to receive treatment are not the only delays that patients faced in 1999. Patients also experienced significant waiting times for various diagnostic technologies across Canada: computerized tomography (CT) scans, magnetic resonance imaging (MRI), and ultrasound. The median wait for a CT scan across Canada was 5 weeks, a 6.4 percent increase over 1998. The shortest wait for computerized tomography was found in New Brunswick (3 weeks), while the longest wait occurred in Prince Edward Island (8 weeks). The median wait for an MRI across Canada was 12 weeks, a 5.3 percent increase in waiting time since 1998. Patients in Manitoba experienced the shortest wait for an MRI (8 weeks), while Alberta residents waited longest (18 weeks). Finally, the median wait for ultrasound was 2.5 weeks across Canada, a 13.8 percent decrease since 1998. Sas-

katchewan displayed the shortest wait for ultrasound (1.5 weeks), while Manitoba exhibited the longest ultrasound waiting time, 7 weeks.

Numbers of people waiting

The numbers of people waiting for each procedure and therefore each specialty were also calculated. Throughout Canada, the total number of people waiting for treatment was 166,150 in 1999, a reduction of 22 percent between 1998 and 1999. The number of people waiting rose in Saskatchewan, Newfoundland, and Prince Edward Island. As a percentage of the population, 0.54 percent of Canadians were waiting for treatment in 1999, which varied from a low of 0.36 percent in Ontario to a high of 2.23 percent in Saskatchewan.

Verification of the data

To attempt to corroborate the findings of this survey and previous ones, current waiting time data were solicited from provincial governments, and past waiting time data were drawn from peer-reviewed journals. Provincial governments ended up providing nine waiting times which could be directly compared with Institute data. Of these nine cases, the Institute estimates were higher in five cases, lower in three, and identical in one. As well, previous Institute estimates of waiting times were compared with measures from scholarly journals. This allowed 13 comparisons; in 11 of 13 cases, the Institute figures fell below the comparison values, with only one instance in which the Institute value exceeded the comparison value, and one case in which they were identical. This evidence from these two comparison sources, government and academic research, strongly suggests that the Institute’s measurements are not biased upward, but may even be biased downward, understating actual waiting times.

Summary: The magnitude of the problem, and the importance of reform

Canada-wide total waiting time increased in 1999, and its level is high, both historically and internationally. Compared to 1993, waiting time in 1999 is 51 percent higher. Moreover, academic studies of waiting time have found that Canadians wait longer than Americans, Germans, and Swedes (sometimes) for cardiac care, although not as long as New Zealanders or the British.

Furthermore, waiting time has been found in medical research to entail adverse consequences for cardiac outcomes, and attempts by economists to quantify these costs have amounted to \$1,100 to \$5,600 per patient annually. More graphic evidence of this point is found in OECD estimates of disability-free life expectancy, which has fallen for Canadian women since the late 1970s, in contrast to the rising pattern during this time for women in Japan, Germany, the US, and the UK.

The extent of Canada's health system dysfunction has most recently been documented in a Fraser Institute study examining the impact of increases in government health spending. This analysis revealed that prov-

inces which spent more on health care per person had neither shorter (nor longer) total waiting times than provinces that spent less. In addition, provinces which spent more had no higher rates of surgical specialist services (consultations plus procedures) and had *lower* rates of procedures and major surgeries.

Finally, the egalitarian promise of the Canadian health care system is not being realized. On the contrary, a profusion of recent research reveals that cardiovascular surgery queues are routinely jumped by the famous and politically-connected, that suburban and rural residents confront barriers to access not encountered by their urban counterparts, and that low-income Canadians have less access to specialists, particularly cardiovascular ones, and lower cardiovascular and cancer survival rates than their higher-income comrades.

This grim portrait is the legacy of a medical system offering low expectations cloaked in lofty rhetoric. Indeed, under the current regime—first-dollar coverage with use limited by waiting, and crucial medical resources priced and allocated by governments—prospects for improvement are dim. Only substantial reform of that regime is likely to alleviate the medical system's most curable disease—protracted waiting for care, and its tragic progeny.

Waiting Your Turn

With rare exceptions, waiting lists in *Canada*, as in most countries, are non-standardized, capriciously organized, poorly monitored, and (according to most informed observers) in grave need of retooling. As such, most of those currently in use are at best misleading sources of data on access to care, and at worst instruments of misinformation, propaganda, and general mischief.

—McDonald, Shortt, Sanmartin, Barer, Lewis, and Sheps (1998)

Waiting list measurement is an enterprise fraught with criticism. Yet, despite the vigorous disclaimers expressed in government-contracted reports such as the National Health Research and Development Program study quoted above, Canadian health care consumers are desperately concerned with waiting time and the general state of the health care system. Consequently, consumers, as well as health providers and policymakers, rely on available data regarding waiting time. Among these data, The Fraser Institute's annual study is the only comprehensive study of waiting across provinces and medical specialties. As such, *Waiting Your Turn* may be particularly subject to attack because of its very prominence in discussions of waiting time in particular, and of health care reform in general. In this light, critiques by the federal and provincial governments are not surprising, in that the existence of lengthy waiting times is a potential indictment of government intervention in the medical system.

Indeed, governmental criticisms of early editions of *Waiting Your Turn* were common and fierce. At the time of this tenth edition, it appears, however, that imitation, albeit belated, is the sincerest form of flattery. Provincial health ministries are now more likely to monitor and collect waiting time data than ever before. A much-heralded example of this was the decision by British Columbia's Ministry of Health to disseminate on-line waiting-time information. The significance of waiting lists to the health policy debate has been further emphasized by recent federal government insistence on accountability in the form of annual report cards. Such governmental concern about waiting times is not only ironic because of previous criticisms but also because the existence of waiting lists for

medical procedures and treatments is one manifestation of the governmental rationing of health sector resources that occurs in Canada. To the extent that there is rationing of hospital capacity by means other than price, monetary and non-monetary costs are nevertheless borne by Canadians, even though these costs are not explicitly recognized. These unrecognized costs may include, for example, lost work time, decreased productivity associated with physical impairment and anxiety, and physical and psychological pain and suffering.

A working person incapacitated by an illness bears the costs of the loss of work. These costs are not included among those associated with running the health care system. Cancer patients who must drive long distances to regional health centres or to the United States for radiation therapy bear costs in terms of lost time that are neither included in health costs nor in any way compensated for by the health care system. A woman with a lump in her breast, who is told she must wait four weeks for a biopsy to determine whether the lump is cancerous, finds little comfort in the advice from her physician that epidemiological research shows that it does not matter to the outcome if the biopsy is delayed that long. The woman's anxiety and tangible psychological pain are not included in the costs of operating the health care system.

All of the foregoing represent actual phenomena characteristic of the Canadian health care experience and, in each of these cases, the savings to the government's budget are real but must be compared with the real though uncounted costs to Canadian health care consumers. While it is difficult to measure these costs, it is possible to measure the extent of queuing or the length of waiting lists in order to approximate the extent to which these costs may be mounting.

As noted, a number of health sector administrators are skeptical about the meaning and usefulness of waiting lists. They are skeptical both of the relevance of waiting lists as an indicator of the performance of the health care sector, and of the reliability of such data as a measure of the extent of rationing of health care services (Amoko, Modrow, and Tan, 1992). An earlier Fraser Institute publication evaluated various theoretic-

cal issues related to hospital waiting lists, including their relevance as measures of “excess demand” (Globerman, 1990). This discussion defended the proposition that waiting lists are a potentially important barometer of performance in the health care sector. It also provided estimates of waiting lists for a set of hospital procedures in British Columbia. That study was followed in 1991 by a 5-province analysis similar to the initial study. Since 1992, all 10 provinces in Canada have been surveyed.

This report builds upon the Institute’s earlier studies by updating waiting list estimates for all of the provinces. In the next section, the relevant theoretical issues underlying these estimates are briefly reviewed.

Waiting lists as measures of excess demand

One interpretation of hospital waiting lists is that they reflect excess demand for medical treatments performed in hospitals and that they therefore 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 a given treatment or procedure. That such involuntary waiting is a form of rationing and not simply the postponement of a service can be seen from the fact that there are costs involved for those who are forced to wait. Data published in 1991 by Statistics Canada indicate that 45 percent of those who are waiting for health care in Canada describe themselves as being “in pain” (Statistics Canada, 1991). While not all of this pain would be alleviated by a visit to the doctor or by the surgical procedure for which the patient is waiting, some of it undoubtedly is the direct result of waiting. More recent Statistics Canada data show that over one million Canadians felt that they needed care but did not receive it in 1994, and that approximately 30 percent of these people were in moderate or severe pain (Statistics Canada, 1994/95).

A 1993 study by the Institute for Clinical Evaluative Studies at the University of Toronto categorized all patients waiting for hip replacements according to their pain levels (Williams and Naylor, 1993). The study found that in Ontario, 40 percent of those who were experiencing severe disability as well as 40 percent of those who suffered severe pain were waiting 13

months or more for hip surgery. A further 40 percent of those who were in severe pain waited 7 to 12 months, while only 14 percent of those in severe pain waited less than 4 months. While some of these patients might have been postponing surgery for their own reasons, the fact that they were experiencing severe pain probably means that most were being denied prompt access to treatment.

Moreover, adverse consequences from prolonged waiting are increasingly being identified and quantified in the medical and economics literatures. Beanlands *et al.* (1998) assessed the impact of waiting time for cardiac revascularization on mortality, cardiac events (e.g., heart attacks), and heart functioning. Patients who were revascularized earlier had significantly lower preoperative mortality than those who were revascularized later. As well, those treated earlier had a lower rate of subsequent cardiac events (a difference which approached statistical significance), and significant improvement in heart function (unlike the patients receiving later treatment).

Similarly, Morgan, Sykora, and Naylor (1998) examined the effect of waiting time on death rates among patients waiting for heart surgery. In their analysis, those who waited longer for surgery, both in absolute terms and relative to the maximum wait recommended, had a higher probability of death while waiting. In a related inquiry, Rosanio *et al.* (1999) found that those who waited longer for coronary angiography were more likely to suffer the adverse consequences of cardiac hospitalization, heart attack, and cardiac-related death.

To express more concretely the cost of these effects on morbidity and mortality, economists have attempted to infer the monetary costs associated with waiting for treatment. Because paying for private care is the alternative to waiting for publicly-provided care in the UK, Cullis and Jones (1986) deduce that the cost of waiting for treatment in terms of reduced morbidity and mortality is, at a maximum, the cost of private care. Taking the actual costs of private care for a variety of important and common treatments, Cullis and Jones estimate that the cost of waiting in the UK in 1981 was about \$5,600 per patient. Alternatively, Globerman (1991) treats waiting time as a period during which productive activity (either for pay or in the household) is potentially precluded. Thus, the cost of a day of waiting is the wage or salary forgone, for which Globerman

uses the Canadian average wage. Only those who report experiencing “significant difficulties in carrying out their daily activities,” about 41 percent of those waiting, are counted as bearing the cost of lost wages, meaning that the cost per patient was about \$2,900 in Canada in 1989. Finally, Propper (1990) estimates the cost of waiting by an experiment in which subjects were asked to choose between immediate treatment (at a varying range of out-of-pocket costs), and delayed treatment (at a varying range of time intervals) at no out-of-pocket cost. From this, she determined that cost per patient was approximately \$1,100 in the UK in 1987.

The idea that waiting can impose costs can be considered via the analogy of wartime rationing of (essentially imposed waiting for) refrigerators or automobiles. Those who wanted refrigerators in 1940 but did not get them until 1946 were not denied the refrigerators; they only had to wait. Clearly, the issue of time is important in goods provision; delay of availability undoubtedly made those waiting worse off. This same logic also applies, sometimes vitally, in the provision of medical services.

Economists generally believe that non-price rationing of scarce resources is inefficient compared to rationing through the price system. In particular, prices are efficient mechanisms for signalling the relative scarcity and value of any good or service, thereby encouraging both producers and consumers to modify their behaviour accordingly. A rise in price occasioned by an increase in the demand for a particular medical procedure thus restrains some health care users, and effectively rations 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 possibility for profit. This supply response does not necessarily occur, however, if government-imposed 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. Efficiency, however, is promoted when

those consumers who *most* value a product obtain it. For example, while a non-working spouse and his wife with the same medical condition might be equally restricted by a system of waiting lists, the working wife would probably be willing to pay a little more to be able to get back to work. The reason is that, in addition to the similar pain they both suffer, she also bears the additional cost of lost wages. In other words, with identical illnesses, the wife and husband do not have the same illness cost, including forgone wages, and thus place different values on the medical service that they are both denied by waiting.

At least two prominent qualifications can be raised about the social inefficiencies of rationing by waiting. One is the claim that, without rationing by waiting, many procedures and treatments are performed for which the social costs outweigh the social benefits. Thus, making patients wait is efficient, the argument goes, so that they are prevented from using services for which social costs outweigh social benefits. In these cases, however, it would be more desirable to discourage the consumption of a given amount of medical services by price rationing rather than by non-price rationing. In other words, let the working wife pay the increased costs of earlier treatment so that she can get back to work, and let her husband wait for an opening on the “elective” surgical waiting list. That is the appropriate approach unless one is prepared to argue that patients will pay any price to receive specific treatments (a view only supportable with regard to a few life-saving treatments) and that government bureaucrats are better able than consumers are to determine whether treatment is warranted.

A second 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 an objective, 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 benefits may not be any improvement upon the price-rationing outcome. In fact, many inequities have been discovered in the current system. Preferential access to cardiovascular surgery on the basis of “nonclinical factors” such as personal prominence or political connections is common (see Alter, Basinski, and Naylor, 1998). As well, residents of suburban Toronto and Vancouver have longer waiting times than do their urban counterparts (Ramsay, 1997) and

residents of northern Ontario receive substantially lower travel reimbursement from the provincial government than do southern Ontarians when travelling for radiation treatment (Priest, 2000). Finally, low-income Canadians are less likely to visit medical specialists (Dunlop, Coyte, and McIsaac, 2000), including cardiac specialists, and have lower cardiac and cancer survival rates (Alter, *et al.* 1999; Mackillop, 1997). This evidence indicates that rationing by waiting is often a facade for a system of personal privilege, and perhaps even greater inequality than rationing by price. Moreover, perceived inequity in the distribution of medical services due to perceived inequity in income distribution can better be rectified by lump-sum income transfers, or subsidies for the purchase of health insurance by the poor.

To be sure, there are many arguments that have been made both for and against private medical insurance systems (Blomqvist, 1979; McArthur, Ramsay, and Walker, 1996). For the purposes of this report, it is accepted that 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 and how that excess demand is rationed are relevant public policy issues, since the social costs associated with non-price rationing should be compared to whatever benefits are perceived to be associated with it.

Non-price rationing and methods of adapting

There are several ways in which non-price rationing can take place under the current health care system, and many ways in which individuals adapt to rationing. One form of non-price rationing is a system of triage, the three-way classification system developed by Florence Nightingale for sorting the wounded on the battlefield in wartime. Under such a system, the physician sorts the patients into three groups: those who are beyond help, those who will benefit greatly from immediate care (and suffer greatly or die without it), and those who can wait for care.

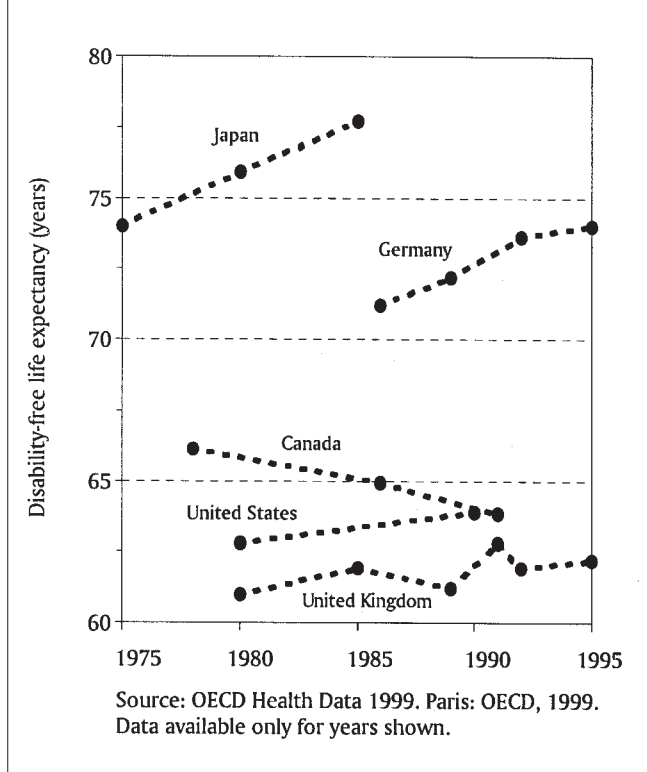
In peacetime, of course, there still are limited resources, requiring physicians to employ the triage

system to make choices about the order in which people should be treated. In this setting, physicians effectively ration access by implicitly or explicitly rejecting candidates for medical treatment. In the absence of well-defined criteria, doctors might be expected to reject those candidates least likely to suffer morbid and mortal consequences from non-treatment and those whose life expectancy would be least improved by treatment. The British experience suggests that some doctors use a forgone-present-value-of-earnings criterion for selecting patients for early treatment, thereby giving lower priority to older or incurable critically ill patients (see Aaron and Schwartz, 1984). The experience of Canada's largest cancer treatment centre suggests that doctors give priority for radiation treatment to people whose cancers may be curable rather than using radiation machines to provide palliative care or limited extensions to life expectancy (*Globe and Mail*, 1989, p. A1).

Although both men and women in Canada can expect to live, on average, about 5 years longer than they did 20 years ago, between 1978 and 1991 the number of years that Canadians could expect to live free of disabilities declined by 2.3 years for women (chart 1) and 0.4 years for men, while it was increasing during that time in most other OECD countries (OECD, 1999). The reason for this decline is not obvious, but it coincides with the findings of recent surveys that reveal an increasing degree of non-price rationing in the health care system in Canada. It has long been known that when non-price rationing emerges in a health care system, the elderly are the most likely to feel the impact (Binney and Estes, 1988; McKinnon, 1995; Anderson, 1995) because, in a classic triage system, older patients tend to get placed at the end of the queue as they are expected to benefit less (receive fewer years of symptom reduction or life extension, on average) from treatment.

Canadians may be adapting to non-price rationing by substituting private services for unavailable public services and, specifically, by purchasing medical services outside the country. Provincial health care plans, in fact, cover emergency medical services as well as other services only available outside Canada. Possibly as a reflection of the increasing prevalence of waiting in the health care system, there are companies in Ontario and British Columbia that facilitate diagnostic testing and treatment in the United States (Taube, 1999), and American medical centres have advertised

Chart 1: Disability-Free Life Expectancy for Women from Selected OECD Countries



in Canadian newspapers. This year's survey of specialists (reported later in this study) found that 1.6 percent of patients received treatment in another country during 1999.

Measuring rationing by waiting

Observers who argue that hospital waiting lists are not a particularly important social issue believe that such lists tend to be inaccurate estimates of rationing or that there is little social cost associated with enforced waiting. One frequently expressed concern is that doctors encourage a greater demand for medical care than is socially optimal. As a result, the critics argue, while waiting lists exist for specific treatments, there are 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 the public's perception of a health care crisis so as to increase public funding of the medical system.

The available evidence on the magnitude of the demand induced by the suppliers for medical services is, at best, ambiguous (see Frech, 1996). The view that this is a modest problem is supported by the fundamental economic argument that competition among physicians will promote a concordance between the physician's interests and those of the patient. Effectively, general practitioners usually act as agents for patients in need of specialists, while specialists carry out the bulk of hospital procedures. Thus, general practitioners who mitigate medical problems while sparing patients the pain and discomfort of hospital treatments will enhance their reputations compared to those who unnecessarily 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 overprescribe painful and time-consuming hospital treatments.

As well, specialists who place excessive numbers of patients on hospital waiting lists may bear direct costs. For example, those specialists may be perceived by hospital administrators to use a disproportionate share of hospital resources. This may make it more difficult for them to provide quick access to those resources for patients who, in their own view and those of their general practitioners, are in more obvious need of hospital treatment. Similarly, patients facing the prospect of a relatively long waiting list may seek treatment from other specialists with shorter waiting times.

An additional reason to be skeptical of claims that demand is induced by physicians is that it is implausible for an individual physician to believe that the length of his or her waiting list will significantly affect overall waiting time at the provincial or national level, thus leading to additional funding. Because this provides a clear incentive to "free-ride" on the potential wait-list-inflating responses of other physicians, there is no reason for any individual physician to inflate waiting times.

Finally, an additional concern in measuring waiting is that hospital waiting lists are biased upward because reporting authorities double-count or fail to remove patients who have either already received the treatment or who, for some reason, are no longer likely to require treatment. The survey results, however, indicate that doctors generally do not believe that their patients have been double-counted.

In summary, while there are hypothetical reasons to suspect that hospital waiting list figures might overstate true excess demand for hospital treatments, the magnitude of any resulting bias is unclear and probably relatively small. Moreover, empirical verification of the Institute's survey numbers (to be discussed in the two "Verification..." sections) yields no evidence of upward bias.

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 rather than hospital administrators were surveyed 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 (Amoko, Modrow, and Tan, 1992). In those instances where data from institutions are available, they have been used to corroborate the evidence from the survey data.

The survey was conducted in all 10 Canadian provinces. Mailing lists for the specialists polled were provided by Cornerstone List Fulfillment. The specialists on these lists are drawn from the Canadian Medical Association's membership rolls. Specialists were offered a chance to win a \$2,000 prize (to be randomly awarded) as an inducement to respond. Specialists rather than general practitioners were surveyed because specialists have primary responsibility for health care management of surgical candidates. Survey questionnaires were sent to practitioners of 12 different medical specialties: plastic surgery, gynaecology, ophthalmology, otolaryngology, general surgery, neurosurgery, orthopaedic surgery, cardiovascular surgery, urology, internal medicine, radiation oncology, and medical oncology. The original survey (1990) was pretested on a sample of individual specialists serving on the relevant specialty committees of the British Columbia Medical Association. In each subsequent edition of the survey, suggestions for improvement made by responding physicians have been incorporated into the questionnaires, and in 1994, radiation oncology and medical oncology were added to the 10 specialties originally surveyed.

The questionnaire used for general surgery is found in Appendix 1. The questionnaires for all of the special-

ties follow this format (with a slight exception for medical oncology); only the procedures surveyed differ across the various specialty questionnaires. The data for this issue of *Waiting Your Turn* were collected in December 1999.

For the most part, the survey was sent to all specialists in a category. In the case of internal medicine in Ontario, approximately 500 names were randomly selected. The response rate in the five provinces initially surveyed in 1990 (British Columbia, Manitoba, New Brunswick, Newfoundland, Nova Scotia) was 20 percent. This year, the response rate was 25 percent overall, which is quite high for a mailed survey, and an increase from the 23 percent response rate of last year's survey.

Methodology

The treatments identified in all of the specialist tables represent a cross-section of common procedures carried out in each specialty (definitions of procedures are found in Appendix 2). The original list of procedures was suggested by the specialty boards of the British Columbia Medical Association in 1990, and procedures have been added since then at the recommendation of survey participants.

At the suggestion of the Canadian Hospital Association, waiting time, since 1995, has been calculated as the median of physician responses rather than the mean or average, as it had been prior to 1995 (Canadian Hospital Association, 1994). The disadvantage of using average waiting times is the presence of outliers (that is, extremely long waiting times reported by a few specialists), which pull the average upwards. Changes in extreme outlier responses can have dramatic effects on the mean value even if the vast majority of the responses still cluster around the same median value. Using the median avoids this problem. The median is calculated by ranking specialists' responses in either ascending or descending order, and determining the middle value. For example, if five neurosurgeons in New Brunswick respond, the median value is the third highest (or third lowest) value among the five.¹ This means that if the median wait reported is 5 weeks for a procedure, half of the specialists reported waits of more than 5 weeks, while half of the specialists reported waits of less than 5 weeks.

The major findings from the survey responses are summarized in tables 2 through 45. Table 2 reports the median time a patient waits for an appointment with a specialist after having been referred by a general practitioner. To obtain the provincial medians (and national median) found in the last column of table 2 (and of tables 28a, 31, and 44), the 12 specialty medians are each weighted by a ratio: the number of procedures done *in that specialty* in the province divided by the number of total number of procedures done *by specialists of all types* in the province.

Tables 3 through 14 report the time a patient must wait for treatment after having seen a specialist, where the waiting time per patient is the median of the survey responses. The provincial weighted medians reported in the last line of each table are calculated by multiplying the median wait for each procedure (e.g., mammoplasty, neurolysis, etc., for plastic surgery) by a weight—the fraction of all surgeries within that specialty constituted by that procedure, with the sum of these multiplied terms forming the weighted median for that province and specialty.

Tables 15 through 26 report the estimated number of patients waiting for surgery. To allow for interprovincial comparisons, these tables also report the number of people waiting for surgery per 100,000 population. The number of people waiting for treatment is estimated using the average of the weeks waited for treatment as reported by responding specialists, and data on numbers of surgical procedures done annually from the Canadian Institute for Health Information (CIHI) for 1997-98 (Canadian Institute for Health Information, 2000; more recent versions of this report are not yet available). This report provides a count of the total number of surgical procedures performed annually in each province. To estimate the number of individuals waiting for a particular surgery, the average weeks waited for a given operation is divided by 52 and then multiplied by the total number of persons annually undergoing this particular operation. This means that a waiting period of, say, one month, implies that, on average, patients are waiting one-twelfth of a year for surgery. Therefore, the next person added to the list would find one-twelfth of a year's patients ahead of him or her in the queue. The main assumption underlying this estimate is that the number of surgeries per-

formed will neither increase nor decrease within the year in response to waiting lists.

There are a number of minor problems in matching CIHI's categories of operations to those reported in the survey. In several instances, an operation such as rhinoplasty is listed under more than one specialty. In these cases, the number of patients annually undergoing this type of operation is divided among specialties according to the proportion of specialists in each of the overlapping specialties; e.g., if plastic surgeons constitute 75 percent of the group of specialists performing rhinoplasties, then the number of rhinoplasties counted under plastic surgery is the total multiplied by .75. A second problem is that, in some cases, an operation listed in the questionnaire has no match in the CIHI tabulation. An example is the urological operation called ureteral reimplantation for reflux, which is not listed in the CIHI count. In these cases, no estimate is made of the number of patients waiting for these operations.

Tables 28a and 28b present, respectively, median waiting time and the estimated number of patients waiting, compared among specialties and provinces. Because the questionnaires omit some procedures that are less commonly performed, the sum of the numbers of people waiting for each specialty in table 28b is, of course, an underestimate of the total number waiting. Nevertheless, the lists of procedures surveyed in the questionnaires represent between 74 percent and 83 percent of non-emergency surgery performed in each of the provinces studied.

The final row of table 28a displays the provincial and national weighted medians for the 12 specialties surveyed. As in tables 3 through 14, weighted medians are calculated by multiplying the median wait for each specialty by the fraction of all surgeries in that province occurring in that specialty, and then summing these multiplied terms corresponding to each specialty.

The number of people waiting for non-emergency surgeries that were not included in the survey was also calculated, and is listed in table 28b as the "residual" number of patients waiting. To estimate the residual number of people waiting, the number of non-emergency operations not contained in the survey that

1 For an even-numbered group of respondents, say, 4 physicians, the median is the average of the two middle values—in this example, the average of the second and third highest values.

are done in each province annually must be used. This residual number of operations (compiled from the CIHI data) is then multiplied by each province's weighted average waiting time and divided by 52 (weeks). Estimates of the residual number of patients waiting are reported in table 28b.

Tables 32 through 43 report the median values for the number of weeks estimated by specialists to be clinically reasonable lengths of time to wait for treatment after an appointment with a specialist. The methodology used to construct these tables is analogous to that used in tables 3 through 14.

Verification of current data with governments

In July 2000, preliminary data were sent across Canada to provincial ministries of health, and provincial cancer and cardiac agencies. Replies were received from provincial health ministries in Alberta, British Columbia, Manitoba, New Brunswick, Prince Edward Island, and Saskatchewan, from cancer agencies in Manitoba and Ontario, and from the cardiac agency in Ontario.

The data provided allowed a number of direct comparisons to be made. In particular, 22 comparisons of waiting times were made, and 13 comparisons of numbers of people waiting were made. In 18 out of 22 waiting-time comparisons, the survey numbers were in excess of the provincially provided numbers while, in three cases, the survey numbers understated the government-estimated waiting time, and, in one case, were identical.

Of the 18 cases in which the survey data exceeded the government data, 13 were data for British Columbia. In British Columbia, the Ministry of Health defines waiting time in a manner that, by necessity, make its estimates smaller than those in this survey. Specifically, the Ministry defines a wait as the interval between the time the procedure is formally scheduled and the time it is actually carried out. Not only does this definition omit waiting time between GP and specialist (which the Institute's survey includes in the total), but it understates the patient's actual waiting time between seeing a specialist and actually receiving treatment. Nevertheless, the Ministry suggests that the degree of understatement is small: "We believe that in most

cases surgeons forward... booking forms without delay once a decision to perform the procedure is taken, and that hospitals receive them within a day or two" (Kelly, 1999). However, because most hospitals only book a few months ahead, this method of measuring waiting lists undoubtedly omits a substantial fraction of patients with waits beyond the booking period (see Ramsay, 1998).

If the discrepancies between the survey and the data from British Columbia are ignored due to this difference in definitions, there are 5 remaining cases in which the survey data exceeds government estimates, three cases in which the government data exceeds the survey data, and one case in which they are identical. This approximate equality in the number of overstatements (5) and non-overstatements (3) suggests that any errors in the survey data are not substantially biased in either direction.

In addition, Saskatchewan Health (Donnelly, 2000) raises concern that the survey figures exceed their own data for most specialties. Particularly, they report that they compared *average* waiting times from their two major urban centres, Saskatoon and Regina, with the Institute's *median* waiting times, and find that for only two specialties (ophthalmology and neurosurgery) do the Institute's figures indicate a shorter waiting time. Moreover, they report that the Institute's figures are more than twice their own for gynaecology, orthopaedic surgery, otolaryngology, general surgery, and urology. They also rightly note that *average* waiting time will typically overstate *median* waiting time, implying that if they were to compute *median* values for their data, they would be even farther below the Institute's figures. Unfortunately, Saskatchewan Health did not provide precise numerical values, offering instead statements such as, "In gynaecology, orthopaedic surgery, otolaryngology, general surgery, and urology our information shows average waits less than half as long as the median waits you report" (Donnelly, 2000). As well, definitive comparisons are difficult to make given that the Saskatchewan Health data is urban-based, and thus not potentially representative of longer waiting times which may exist outside of urban centres (see Ramsay, 1997 for a related finding), although Saskatchewan Health offers the disclaimer that, "While smaller centres do not report waiting list information to the Department, it is our understanding that waits for surgery there are generally shorter than in the two largest districts" (Donnelly, 2000).

Finally, of the 13 cases in which numbers of patients waiting were compared, the estimates from this survey were exceeded by the government estimates in 11 cases. In other words, governments, in most cases, reckoned that more people were waiting than did participants in the Institute's survey.

Verification and comparison of earlier data with independent sources

The waiting list data can also be verified by comparison with independently-computed estimates, primarily found in academic journals. Seven studies predate the Institute's data series, and thus offer informal basis for comparison. In 1967, a survey of British Columbia hospitals was done by the British Columbia Hospital Insurance Service (Pallan, 1967). This 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 British Columbia that year. The 1999 estimate of 31,237 people waiting for surgery in British Columbia (a decrease of 4,148 from the 1998 estimate; see table 29b) represents 0.8 percent of the 1999 population.

A brief survey of Ontario hospitals undertaken in October 1990 for the General Accounting Office of the United States Government (1991) indicates that patients experienced waits (after seeing a specialist and before receiving treatment) for elective orthopaedic surgery ranging from 8.5 weeks to 51 weeks, for elective cardiovascular surgery ranging from one to 25 weeks, and for elective ophthalmology surgery ranging from 4.3 to 51 weeks. The new survey data presented here (in table 28a) finds typical Ontario patients waiting 13.4 weeks for orthopaedic surgery, 7.6 weeks for elective cardiovascular surgery, and 7.8 weeks for ophthalmology procedures in 1999.

A study of waiting times for radiotherapy in Ontario between 1982 and 1991 (Mackillop *et al.*, 1994) found that the median waiting times between diagnosis by a general practitioner and initiation of radiotherapy for carcinoma of the larynx, carcinoma of the cervix, and non-small-cell lung cancer were 30.3 days, 27.2 days, and 27.3 days, respectively. The new survey data for 1999 fall within one week, roughly, of these estimates. In Ontario in 1999, the wait for radiotherapy was 42

days for each of these three cancer types (see tables 2 and 13). However, the 1999 estimate that the median wait for prostate cancer treatment was 63 days is much lower than Mackillop's estimate of 93.3 days.

A study of knee replacement surgery in Ontario found that in the late 1980s, the median wait for an initial appointment with an orthopaedic specialist was 4 weeks, while the median waiting time to receive a knee operation was 8 weeks (Coyte *et al.*, 1994). By comparison, the Institute's survey finds that in Ontario in 1999, the wait to see an orthopaedic specialist was 8 weeks (see table 2) and the wait to receive hip or knee surgery was 16 weeks (see table 9).

Examination of waiting times for particular cardiovascular treatments in 1990 by Collins-Nakai *et al.* (1992) focused on three important procedures. They estimated median Canadian waiting times of 11 weeks for angioplasty and 5.5 months for cardiac bypass surgery. In comparison, 1999 median waiting times for "angiography/angioplasty" ranged from 4.5 weeks in New Brunswick to 13 weeks in Newfoundland (see table 12), and for elective cardiac bypass ranged from 8.5 weeks in Ontario to 52 weeks in Newfoundland (see table 10).

A study of waiting times for selected cardiovascular procedures in 1992 found that in Canada, 13.3 percent of waiting times for elective coronary bypass surgery fell in the 2-to-6-week range, with 40 percent in the 6-to-12-week range, 40 percent in the 12-to-24-week range, and 6.7 percent in the over-36-weeks range (Carroll *et al.*, 1995). Again, the 1999 data indicated that the provincial waiting time for elective bypass surgery (between specialist consultation and treatment) ranged from 8.5 weeks in Ontario to 52 weeks in Newfoundland (see table 10).

Regarding waiting time for coronary artery bypass in Ontario in the early 1990s, Morgan *et al.* (1998) discovered that the median and mean waits were 18 and 38 days, respectively. By comparison, the 1999 Ontario survey data reveal waiting times for emergent, urgent, and elective bypass surgery of 0, 1, and 8.5 weeks, respectively (see table 10).

Three more recent studies permit direct comparison of Fraser Institute waiting times and independently-derived estimates. DeCoster *et al.* (1999) obtained median waiting times for 8 common surgical procedures in Manitoba for the period 1995-96. Seven of

those 8 procedures—cholecystectomy, hernia repair, excision of breast lesions, varicose veins stripping and ligation, transurethral resection of the prostate, tonsillectomy, and carotid endarterectomy—are also contained in The Fraser Institute’s annual survey. For 5 of these 7, Fraser Institute estimates of waiting time in Manitoba for 1995 (see Ramsay and Walker, 1996) were *lower* than the values found by DeCoster *et al.* In only one case—carotid endarterectomy—was the Institute measure higher, and for cholecystectomy the two estimates were equal.

Bell *et al.* (1998) surveyed the two largest hospitals in every Canadian city of 500,000 or more² in 1996-97 to learn their waiting times for 7 procedures, many of which were diagnostic. Among these, 3 were also collected by the Institute—magnetic resonance imaging, colonoscopy, and knee replacement. In all three cases, the median waiting times found by Bell *et al.* exceeded the Institute’s Canada-wide waiting times (for these, see Ramsay and Walker, 1997).

Liu and Trope (1999) assessed the length of wait for selected ophthalmological surgeries in Ontario in late 1997. Three of these procedures are also tracked in the Institute’s survey—cataract extraction, corneal transplant, and pterygium excision. In all three cases, the Institute figures (see Ramsay and Walker, 1998) were lower than the values independently derived by Liu and Trope.

In summary, 13 independent waiting time estimates exist for comparison with recent Institute figures. In 11 of 13 cases, the Institute figures lie below the comparison values, with only one instance in which the Institute value exceeds the comparison value, and one case in which they are identical. This evidence strongly suggests that the Institute’s measurements are not biased upward, but, if anything, may be biased downward, understating actual waiting times.

Further confirmation of the magnitude of Canadian waiting times can be derived from 5 international comparative studies (the first 4 of which are noted above). Coyte *et al.* (1994) found that in the late 1980s, Canadians waited longer than Americans for orthopaedic consultation (5.4 vs. 3.2 weeks) and for surgery post-consultation (13.5 vs. 4.5 weeks). Collins-Nakai *et*

al. (1992) discovered that in 1990, Canadians waited longer than Germans and Americans, respectively, for cardiac catheterization (2.2 months vs. 1.7 months vs. 0 months), angioplasty (11 weeks vs. 7 weeks vs. 0 weeks), and bypass surgery (5.5 months vs. 4.4 months vs. 0 months). Another study of cardiac procedures, by Carroll *et al.* (1995), revealed that in 1992 Canadians generally waited longer for both elective and urgent coronary artery bypass than did Americans (whether in private or public Veterans’ Administration hospitals) and Swedes, and longer than Americans (in either hospital type) for either elective or urgent angiography. At the same time, Canadians had shorter waits than the British for elective and urgent bypasses and angiographies, and shorter waits than Swedes for both types of angiographies. Finally, Jackson, Doogue, and Elliott (1998) compared waiting time for coronary artery bypass between New Zealand in 1994-95 and Ontario in the same period, using data from Naylor *et al.* (1995). They found that the New Zealand mean and median waiting times (232 and 106 days, respectively) were longer than the Canadian mean and median (34 and 17 days, respectively).

Analysis of cardiovascular surgery

Cardiovascular disease is a degenerative process and the decline in the condition of a candidate for cardiac surgery is gradual. Under the Canadian system of non-price-rationed supply, some cardiac surgery candidates are displaced by patients with non-cardiac conditions that require immediate care. This is not a direct displacement but rather a reflection of the fact that hospital budgets are separated into sub-budgets for “conventional illness” and for other high-cost interventions such as cardiac bypass. Only a certain number of the latter are included in a hospital’s overall annual budget. Complicating matters is the ongoing debate about whether cardiac bypass surgery actually extends life. If it only improves the quality of life, it may be harder to justify increased funding.

The result has been lengthy waiting lists, often as long as a year or more, followed by public outcry, which in turn has prompted short-term funding. Across Canada,

2 Although not identified by name, this list was presumably comprised by Montreal, Toronto, Winnipeg, Calgary, Edmonton, and Vancouver.

many governments have had to provide additional funding for heart surgery in their provinces. In the past, American hospitals have also provided a convenient short-term safety valve for burgeoning waiting lists for cardiac operations. The government of British Columbia contracted Washington state hospitals to perform some 200 operations in 1989 following public dismay over the 6-month waiting list for cardiac bypass surgery in the province.

Wealthy individuals, furthermore, may avoid waiting by having heart surgery performed in the United States. A California heart-surgery centre has even advertised its services in a Vancouver newspaper. Throughout Canada in 1999, 1.7 percent of cardiac patients inquired about receiving treatment in another province, while 2.7 percent asked about treatment in another country. From these inquiries, 0.6 percent received treatment in another province and 1 percent received treatment in another country. Ontarians were the most likely to have received treatment in another province (1.1 percent) or in another country (1.9 percent), and British Columbians were also relatively likely to receive out-of-country care (1.2 percent).

Excess demand and limited supply have led to the development of a fairly stringent system for setting priorities in some hospitals. In some provinces, patients scheduled for cardiovascular surgery are classified by the urgency of their medical conditions. In these cases, the amount of time they wait for surgery will depend upon their classifications. Priorities are usually set based on the amount of pain (*angina pectoris*) that patients are experiencing, the amount of bloodflow through their arteries (usually determined by an angiogram test), and the general condition of their hearts.

Since 1993, the cardiovascular surgery questionnaire, following the traditional classification by which patients are prioritized, has distinguished among emergent, urgent, and elective patients. However, in discussing the situation with physicians and hospital administrators, it became clear that these classifications are not standardized across provinces. British Columbia and Ontario use a 9-level prioritization system developed in Ontario. Other provinces have a 4-level system, with two urgent classifications. Decisions as to how to group patients were thus left to responding physicians and heart centres. Direct comparisons among provinces using these categories

should, therefore, be made tentatively, while recognizing that this survey provides the only comprehensive comparative data available on the topic.

As noted earlier in the text, efforts were made again this year to verify the cardiovascular surgery survey results, using data from provincial health ministries and from provincial cardiac agencies. These data are noted in the tables.

The survey estimates of the numbers of people waiting for heart surgery were derived in the same manner as those for the other specialties, using average waiting time for urgent patients. The average waiting time for urgent patients was used instead of the emergent or elective averages because it is the intermediate of the three measures. This is because in provinces where the length of the waiting list was provided by the hospitals, it became clear that the average wait for elective surgery overestimated the length of the line, while the emergent average waiting time underestimated it.

In 1991, an Ontario panel of 16 cardiovascular surgeons attempted to outline explicit criteria for prioritizing patients (Naylor *et al.*, 1991). The panel also suggested intervals that were safe waiting times for coronary surgery candidates. This process generated 9 categories of treatment priority. For comparative purposes, it was necessary to collapse their 9 priority categories down to the 3 used in this study. Once this was done, their findings suggested that emergent patients should be operated on within 3 days (0.43 weeks). Four of the 8 provincial median emergent wait times for coronary artery bypass in this year's survey fall outside of this range (see table 10). However, physicians in these provinces may define "emergent" to include patients that might be considered "urgent" in other provinces. According to the Ontario panel, urgent surgeries should be performed within 6 weeks. By comparison, the median wait for urgent cardiac surgery in British Columbia falls outside of this range. Finally, the Ontario panel suggests that elective surgeries be performed within a period of 6 months. New Brunswick and Newfoundland currently fall outside of this time frame.

Prior to 1998, this Ontario panel's waiting-time estimates were used as the measure of the clinically reasonable wait for patients requiring cardiovascular surgery. Since 1998, cardiovascular surgeons were asked to indicate their impression of the clinically rea-

sonable length of time for their patients to wait. This year's survey found specialists to be much less tolerant of long waits than the Ontario panel. This year's respondents felt that urgent patients should only wait one week for surgery (instead of 6 weeks), and that patients requiring elective cardiovascular surgery should only wait 5.5 weeks (instead of 6 months; see table 44).

Survey results: estimated waiting in Canada

The total waiting time for surgery is composed of two segments: waiting after seeing a general practitioner before consultation with a specialist, and subsequently, waiting to receive treatment after consultation with a specialist. The results of the most recent survey from 1999 provide details, by province, of total waiting and of each segment.

Waiting time between general practitioner referral and specialist appointment

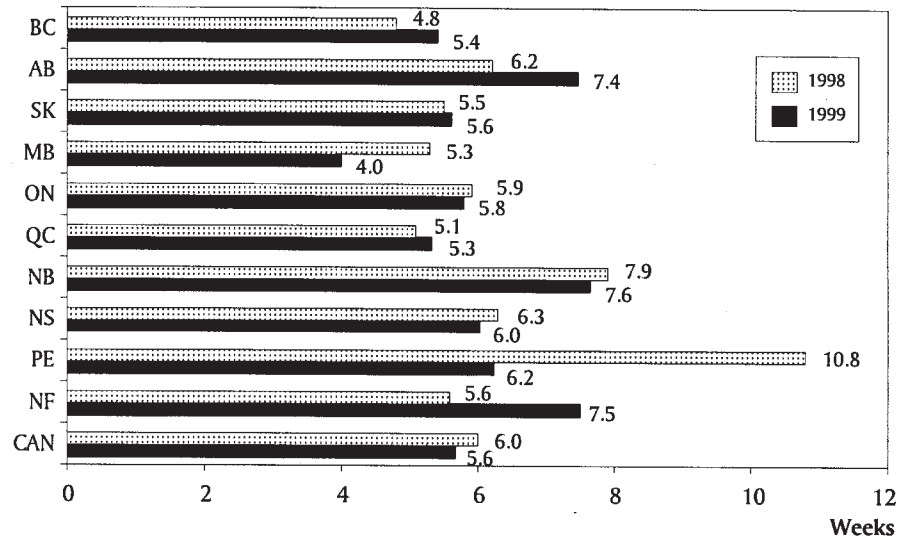
Table 2 indicates the median number of weeks that patients wait for initial appointments with specialists after referral from their general practitioners or from other specialists. For Canada as a whole, the waiting time to see a specialist, 5.6 weeks in 1999, has decreased by 0.4 weeks, or 6.7 percent, since 1998, but has increased by 51.4 percent since 1993, when it was 3.7 weeks (see graphs 1 and 2). The weighted medians, depicted in chart 2 and graph 1, reveal that, overall, Manitoba has the shortest wait in the country for appointments with specialists (4 weeks), while New Brunswick has the longest (7.6 weeks). In five provinces, the waiting time to see a specialist has increased since 1998. Looking at particular specialties, most waits for specialists' appointments are less than two months in duration (see table 2). However, there are

a number of waiting times of 12 weeks or longer: to see a plastic surgeon in Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland, or Nova Scotia; to see an ophthalmologist in New Brunswick, Newfoundland, Nova Scotia, Ontario, Quebec, or Saskatchewan; to see an otolaryngologist in Alberta; to see a neurosurgeon in Alberta, Manitoba, New Brunswick, or Saskatchewan; to see an orthopaedic surgeon in Alberta, British Columbia, or New Brunswick; and to see a urologist in Prince Edward Island.

Waiting time between specialist consultation and treatment

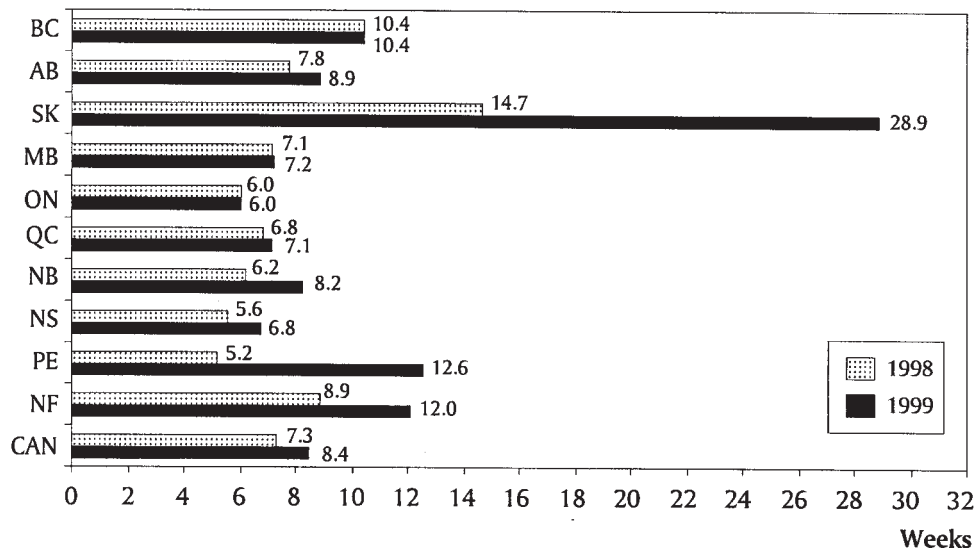
Tables 3 through 14 contain data on waiting time between specialist consultation and treatment for each of the 12 specialties surveyed, including subspecialty breakdowns for the different procedures contained under each specialty heading. These tables indicate that residents of all provinces surveyed wait significant periods of time for most forms of hospital treatment. While some treatments require short waits, most procedures require waits of at least a month. The data in tables 3 through 14 are summarized in table 28a as weighted medians for each specialty for each province and for Canada. For Canada as a whole, the wait for treatment after having seen a specialist rose from 7.3 weeks in 1998 to 8.4 weeks in 1999. This portion of waiting has increased by 50 percent since 1993,

Chart 2: Waiting by Province in 1998 and 1999: Weeks Waited from Referral by GP to Appointment with Specialist



Source: The Fraser Institute, annual waiting list survey; 1999 and 2000.

Chart 3: Waiting by Province in 1998 and 1999: Weeks Waited from Appointment with Specialist to Treatment



Source: The Fraser Institute, annual waiting list survey, 1999 and 2000.

Comparisons of the 1998 and 1999 waiting times for treatment are located in table 29a. This year's study indicates an overall increase in the waiting time between consultation with a specialist and treatment in every province except British Columbia and Ontario (table 29a; chart 3).³ In these two provinces, this waiting time remained constant. At the same time, between 1998 and 1999 the median wait increased by 142 percent in Prince Edward Island and 96 percent in Saskatchewan.

when the wait for treatment after having seen a specialist was 5.6 weeks (see graphs 3 and 4). Ranking the provinces according to the 1999 weighted medians indicates that the longest median wait for surgery after visiting a specialist occurs in Saskatchewan (28.9 weeks) and the shortest is found in Ontario (6 weeks). The median waits for treatment by province are illustrated in chart 3. Among the specialties, the longest Canada-wide waits are found in orthopaedic surgery (16.6 weeks), plastic surgery (10.7 weeks), and elective cardiovascular surgery (10.5 weeks), while the shortest waits exist for urgent cardiovascular surgery (1.3 weeks), medical oncology (2 weeks), and general surgery (4.5 weeks); see table 28a.

Table 30 presents a frequency distribution of the median waits for surgery by province and by region. In all provinces except Saskatchewan, the majority of operations have waiting lists of less than 12 weeks. Newfoundland performs the highest proportions of surgeries within 12 weeks (81.2 percent) and 8 weeks (64.2 percent). Waits of 24 weeks or more are least frequent in Ontario (6.8 percent), and waits of 1 year or more are least frequent in Manitoba (0.8 percent) and most frequent in Saskatchewan (24.8 percent).

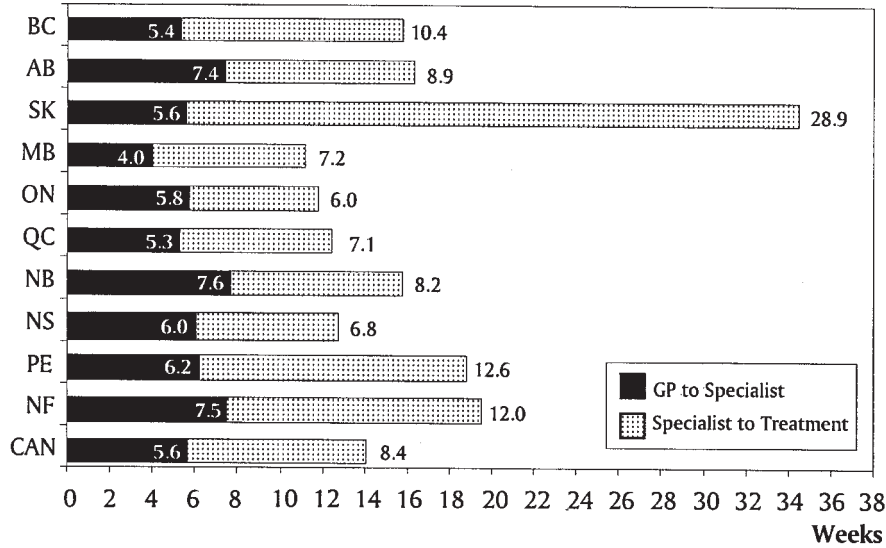
Total waiting time between general practitioner referral and treatment

While the data on these two segments of waiting time convey only partial impressions about the extent of health care rationing, a fuller picture is provided by information on the sum of those two segments, the total waiting time. This overall wait records the time between the referral by a general practitioner and the time that the required surgery is performed. Table 31 and chart 4 present these total waiting times for each province in 1999. For Canada as a whole, total waiting time rose to 14 weeks in 1999 from its previous value of 13.3 weeks in 1998. Among the provinces, total waiting time fell in two of them (Manitoba and Ontario) between 1998 and 1999, but rose in the other 8. The shortest waiting times in 1999 were recorded by Manitoba (11.2 weeks), Ontario (11.8 weeks), and Quebec (12.4 weeks). The longest total waits were found in Saskatchewan (34.5 weeks), Newfoundland (19.5 weeks), and Prince Edward Island (18.8 weeks).

For Canada as a whole, the longest waits for treatment are in orthopaedic surgery, ophthalmology, elective cardiovascular surgery, and neurosurgery. The median

3 The Ontario wait rose from 6.0 in 1998 to 6.04 in 1999, an increase of 1 percent (strictly speaking), but no change given rounding to the first decimal place.

Chart 4: Total Wait by Province in 1999: Weeks Waited from Referral by GP to Treatment



Source: The Fraser Institute, annual waiting list survey, 2000.

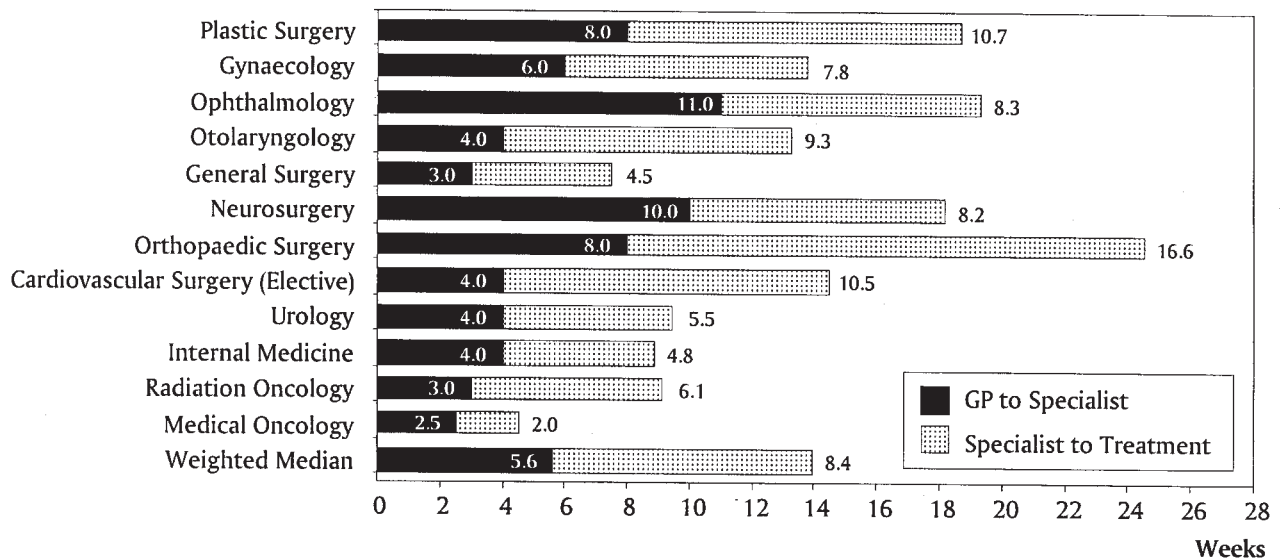
Number of people waiting for treatment

Numbers of people waiting for the various specific procedures comprising each of the 12 specialties are enumerated in tables 15 through 26. Because provincial populations vary greatly, it is hard to gauge the differences in the lengths of waiting lists solely on the basis of the sheer numbers of people waiting. Consequently, in each of tables 15 through 26, numbers waiting are presented not just as a total for each specialty but also on a population-adjusted basis (per 100,000). This allows illustration of population-adjusted differences not apparent from the

waits for these specialties (table 31, chart 5) are 4 months or longer: 24.6 weeks for orthopaedic surgery, 19.3 weeks for ophthalmology, 18.7 weeks for plastic surgery, and 18.2 weeks for neurosurgery. The shortest wait in Canada is for cancer patients being treated with chemotherapy. These patients wait approximately 4.5 weeks to receive treatment.

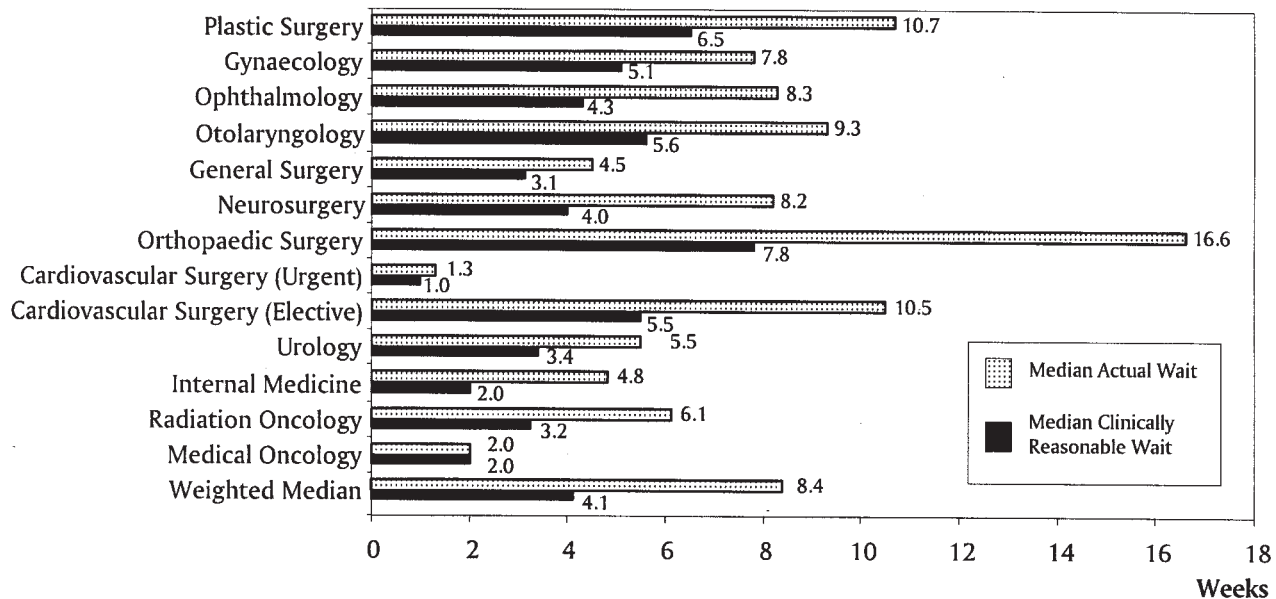
raw totals. For example, in Ontario, there are 700 people waiting for plastic surgery, while there are only 182 waiting in Manitoba (see table 15). However, when the calculation is adjusted for population, a higher frequency of the population is waiting in Manitoba: 16 people per 100,000 population there versus 6 people

Chart 5: Total Wait by Specialty in 1999: Weeks Waited from Referral by GP to Treatment



Source: The Fraser Institute, annual waiting list survey 2000.

Chart 6: Actual Versus Clinically Reasonable Wait by Specialty for Canada: Weeks Waited from Appointment with Specialist to Treatment in 1999



Source: The Fraser Institute, annual waiting list survey, 2000.

per 100,000 in Ontario. Table 27 provides a summary of the waiting numbers statistics.

Comparisons of numbers waiting in 1998 and 1999 are found in table 29b. Seven provinces experienced a decrease between 1998 and 1999 in the number of people waiting. The only provinces that show more people waiting for surgery in 1999 are Newfoundland, Prince Edward Island, and Saskatchewan. The number of people waiting for surgery in Canada decreased from 212,990 in 1998 to 166,150 in 1999, a reduction of 22 percent. As a percentage of the population, 0.54 percent of Canadians were waiting for treatment in 1999, varying from a low of 0.36 percent in Ontario to a high of 2.23 percent in Saskatchewan.

Clinically reasonable waiting times

When asked to indicate a clinically reasonable waiting time for the various procedures, specialists generally indicated a period of time substantially shorter than the median number of weeks patients were actually waiting for treatment (see tables 32 through 43). Table 44 summarizes the weighted median reasonable waiting times for all specialties surveyed. These weighted medians were calculated in the same manner as those in table 28a. Eighty-three percent of the actual weighted median waiting times (in table 28a) are

greater than the clinically reasonable weighted median waiting times (in table 44). For example, the median wait for orthopaedic surgery in British Columbia is 22.4 weeks. A clinically reasonable length of time to wait, according to specialists in British Columbia, is 8.3 weeks. In Newfoundland, the actual time to wait for an otolaryngology procedure is 21.2 weeks, whereas a wait of 3 weeks is considered to be clinically reasonable. The differences between the median reasonable and median actual waits for the specialties are summarized in table 45.

Chart 6 compares the actual median number of weeks patients are waiting for treatment in Canada after having seen a specialist with the reasonable median number of weeks specialists feel patients should be waiting. The largest difference between these two values is in orthopaedic surgery, where the actual waiting time is 8.8 weeks longer than what is considered to be reasonable by specialists.

Health expenditures and waiting times

Given the variation in waiting time across the provinces, a natural question is whether those provinces with shorter waiting times achieve this result by engaging in more government spending on health care. To evaluate this hypothesis, provincial weighted

medians (i.e., the last line in table 31) for the years from 1993 through 1998 were taken from the previous 6 editions of *Waiting Your Turn*. The statistical technique of regression analysis was used to assess whether provinces that spent more on health care (controlling for other differences across provinces such as the percentage of elderly, per capita disposable income, the party in power, and the frequency of health sector strikes) had shorter waiting times. The measure of spending used was real (i.e., adjusted for differences in health costs over time and across provinces) per-capita total government spending on health care. The analysis revealed that provinces that spent more on health care per person had neither shorter nor longer weighted median waiting times than provinces that spent less. In addition, provinces that spent more had no higher rates of surgical specialist services (consultations plus procedures) and lower rates of procedures and major surgeries (for the complete results of this analysis, see Zelder, 2000b).

This finding, that additional spending has no effect on waiting or service provision, must imply that spending increases are entirely being absorbed by wage increases or by administrative expenses. This result, while surprising at first, becomes more understandable when one considers the environment in which Canadian health care is provided. Canadian health care is an enterprise highly dominated by government. Indeed, in 1997, the fraction of total Canadian health spending attributable to governments was 69 percent, and this figure was even higher in preceding years (reaching 77 percent as recently as 1983). A substantial body of economic research demonstrates that governments are almost always less effective providers of goods and services than private firms. Borchering et

al's (1982) comprehensive analysis of 50 studies comparing government and private provision of a variety of goods and services discovered that government provision was superior to private provision (in terms of higher productivity and lower costs) in only two out of those 50 cases. This pattern was replicated in the context of hospital care, where Zelder (2000a) found that the majority of studies comparing for-profit and government-run hospitals indicated that for-profits had lower costs. Consequently, the revelation that higher spending appears to elicit no improvement in waiting time is entirely consistent with this literature. Ominously, this implies that, given the health system's current configuration, increases in spending should not be expected to shorten waiting times.

A note on technology

The wait to see a specialist and the wait to receive treatment are not the only waits that patients face. Within hospitals, limited budgets force specialists to work with scarce resources. Chart 7 gives an indication of the difficulties that Canadian patients have in gaining access to modern medical technologies, compared to their counterparts in the rest of the Organisation for Economic Cooperation and Development (OECD). Despite the fact that Canada was the fifth-highest spender on health care (as a percentage of GDP) in the OECD in 1997, the availability of medical technology (per million people) in Canada typically ranks in the bottom third of OECD nations. Specifically, Canada exhibits low availability of computed tomography (CT) scanners, lithotripters (which break up kidney stones), and magnetic resonance imagers (MRIs), with only radiation equipment in relative abundance (Harriman, McArthur, and Zelder 1999).

Technology	Canadian Value²	OECD Average²	Canadian Rank	Sample Size
CT Scanners	8.1	12.9	21	28
Radiation Equipment	5.3	4.2	6	17
Lithotriptors	0.4	1.4	19	22
MRIs	1.7	3.9	19	27
National Health Expenditure	9.3% of GDP	7.7% of GDP	5	29

¹Not all countries reported 1997 figures for all categories.
²Number per million population, except where noted (last row of table).
 Source: Harriman, McArthur, and Zelder 1999: 9; *OECD Health Data 98*. Paris: OECD, 1998.

Chart 8: Waiting for Technology; Weeks Waited to Receive Selected Diagnostic Tests in 1998 and 1999

	Computerized Tomography		Magnetic Resonance Imaging		Ultrasound	
	1999	1998	1999	1998	1999	1998
British Columbia	6.0	5.9	16.0	12.3	2.0	2.3
Alberta	7.0	6.1	18.0	17.0	3.0	2.4
Saskatchewan	7.0	4.9	13.5	16.6	1.5	4.0
Manitoba	5.3	5.9	8.0	16.8	7.0	8.8
Ontario	4.0	4.4	12.0	11.0	2.0	1.7
Quebec	4.0	4.2	12.0	9.1	4.0	3.8
New Brunswick	3.0	3.8	9.0	8.3	4.0	4.0
Nova Scotia	3.5	6.4	10.0	11.5	2.5	3.8
Prince Edward Island	8.0	3.4	14.0	7.3	4.8	2.4
Newfoundland	6.0	7.1	17.0	0.7	5.5	4.6
Canada	5.0	4.7	12.0	11.4	2.5	2.9

Source: The Fraser Institute, annual waiting list survey, 1999 and 2000.

There are, of course, differences in access to technology among the provinces. This year's study examined the wait for various diagnostic technologies across Canada. Chart 8 displays the median number of weeks patients must wait for access to a CT scanner, an MRI, or an ultrasound machine. The median wait for a CT scan across Canada was 5 weeks, a 6.4 percent increase over 1998. The shortest wait for computerized tomography was found in New Brunswick (3 weeks), while the longest wait occurred in Prince Edward Island (8 weeks). The median wait for an MRI across Canada was 12 weeks, a 5.3 percent increase in waiting time since 1998. Manitoba patients experienced the shortest wait for an MRI (8 weeks), while Alberta residents waited longest (18 weeks). Finally, the median wait for ultrasound was 2.5 weeks across Canada, a 13.8 percent decrease over 1998. Saskatchewan displayed the shortest wait for ultrasound (1.5 weeks) while Manitoba experienced ultrasound waiting of 7.0 weeks.

Conclusion

The 2000 *Waiting Your Turn* survey indicates that protracted and growing waiting for health services in Canada is a reality. Even if one debates the reliability of waiting-list data, this survey reveals that specialists feel their patients are waiting too long to receive treatment. Furthermore, a 1996 national survey conducted

by the College of Family Physicians of Canada showed that general practitioners were also concerned about the effects of waiting on the health of their patients (College of Family Physicians of Canada, 1996). Almost 70 percent of family physicians felt that the waiting times being experienced by their patients were not acceptable.

Patients would also prefer earlier treatment, according to this year's survey data. On average, in all specialties, only 8.3 percent of patients are on waiting lists because they requested a delay or postponement of their treatment. The responses range from a low of 2.3 percent of cardiovascular surgery patients requesting a delay of treatment, to a high of 13.5 percent of gynaecology patients requesting a delay of treatment. Conversely, the percentage of patients who would have their surgeries within the week if there were an operating room available is greater than 50 percent in all specialties except gynaecology and plastic surgery. Radiation oncology patients are the most anxious to receive treatment, with 86 percent of patients willing to receive their treatment within the week. Cardiovascular surgery patients are the next most anxious: 78 percent of these patients were willing to have their surgery or treatment within the week.

Yet, the disturbing trend of growing waiting times in most provinces, documented here, implies that these expectant patients are increasingly likely to be disap-

pointed. Even more discouraging is the evidence presented here that provinces that spend more on health care are not rewarded with shorter waiting lists. This means that under the current regime—first-dollar coverage with use limited by waiting, and crucial medical resources priced and allocated by governments—prospects for improvement are dim. Only substantial

reform of that regime is likely to alleviate the medical system's most curable disease—protracted waiting for care, and its tragic progeny.

Selected Graphs and Tables

Graphs 1–6: Median Actual Waiting Times, 1993 and 1999

Graphs 7–8: Median Reasonable Waiting Times, 1994 and 1999

Graphs 9–19: Actual versus Reasonable Waiting Times, 1994 through 1999, by Province

Tables 1a–1c: Summary of Responses

Table 2: Median Patient Wait to See a Specialist after Referral from a GP

Tables 3–14: Median Patient Wait for Treatment after Appointment with Specialist, by Specialty

Tables 15–27: Estimated Number of Patients Waiting for Treatment

Table 28a: Median Patient Wait for Treatment after Appointment with Specialist (Summary of Tables 3–14)

Table 28b: Estimated Number of Patients Waiting for Treatment (Summary of Tables 15–27)

Table 29a: Comparison of 1998 and 1999 Waits for Treatment after Appointment with Specialist

Table 29b: Comparison of 1998 and 1999 Estimated Number of Patients Waiting for Treatment

Table 30: Frequency Distribution of Specialist-to-Treatment Waiting Times

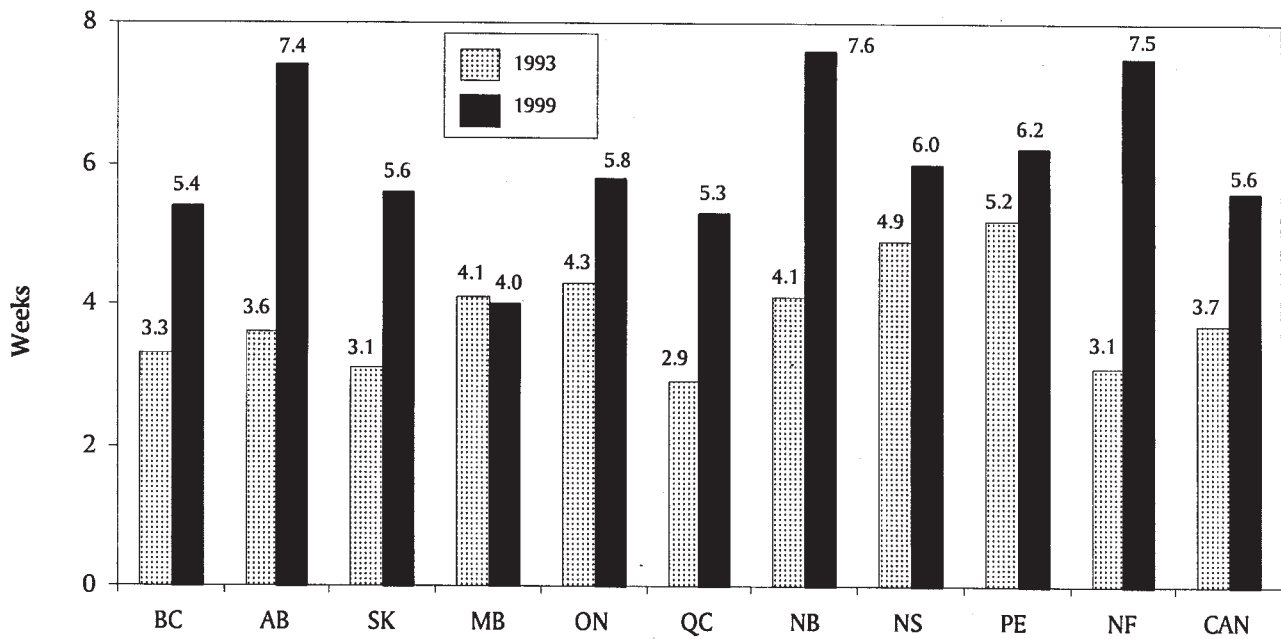
Table 31: Total Expected Waiting Time

Tables 32–43: Median Reasonable Patient Wait for Treatment after Appointment with Specialist, by Specialty

Table 44: Median Reasonable Patient Wait for Treatment after Appointment with Specialist
(Summary of Tables 32–43)

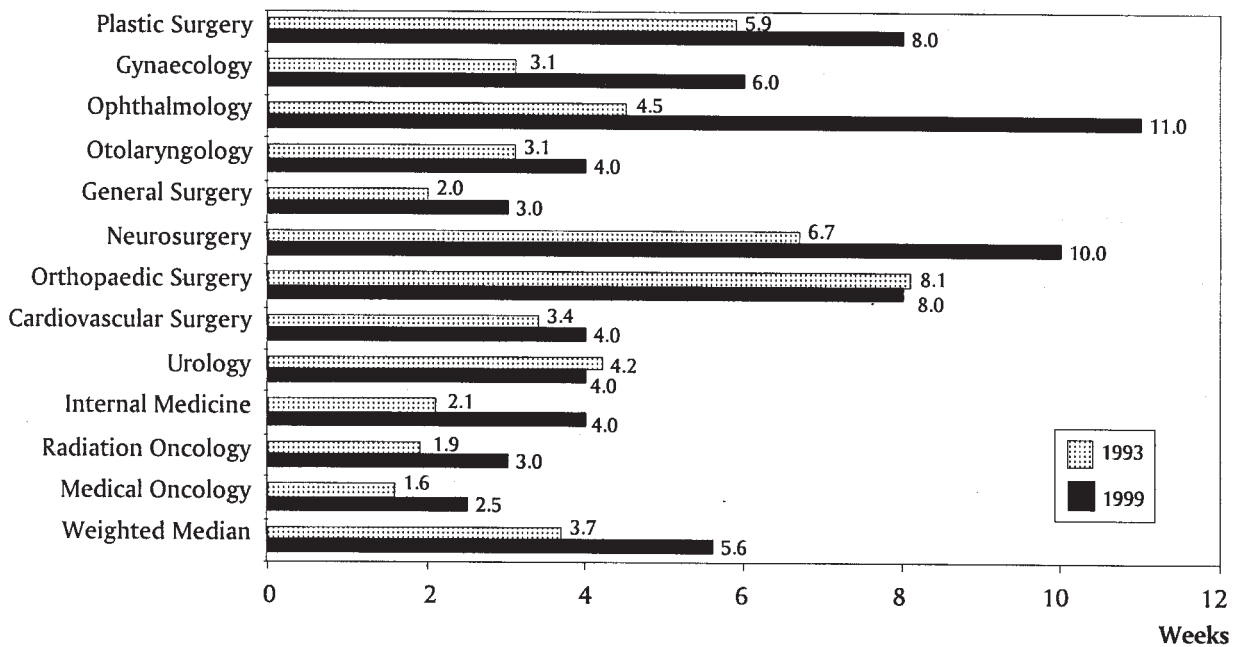
Table 45: Comparison between the Median Actual Number of Weeks Waited and the Median Reasonable Number of Weeks to Wait for Treatment after Appointment with Specialist

Graph 1: Median Wait between Referral by GP and Appointment with Specialist, by Province, 1993 and 1999



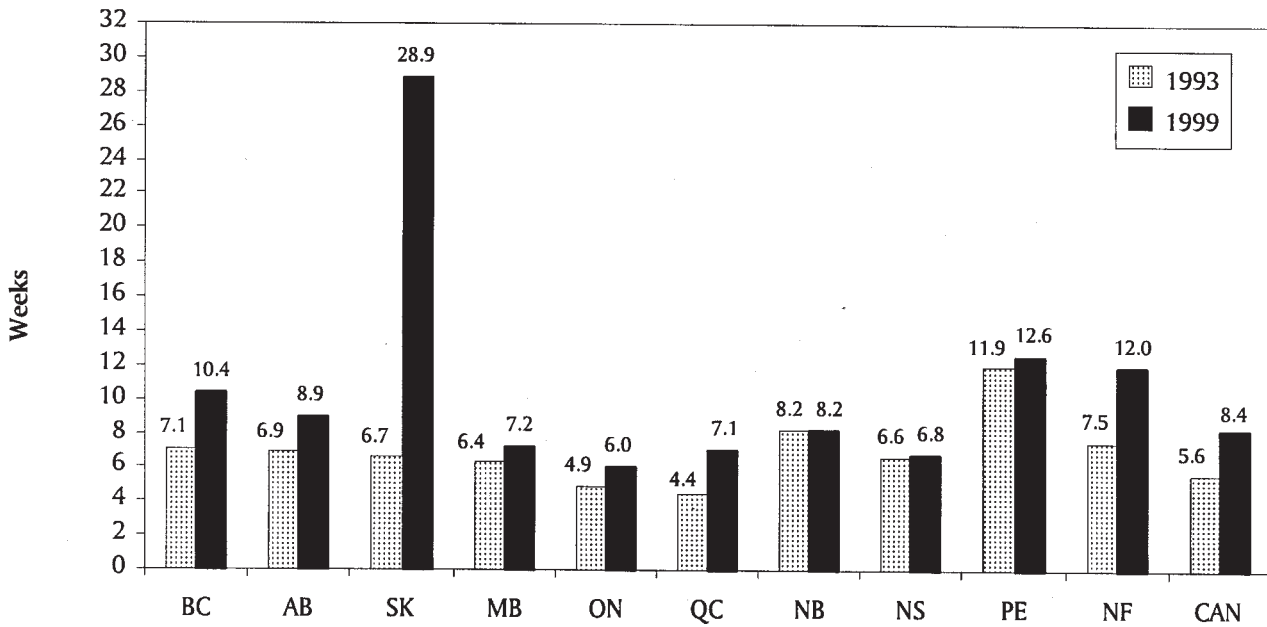
Source: The Fraser Institute, annual waiting list survey, 1994 and 2000.

Graph 2: Median Wait between Referral by GP and Appointment with Specialist, by Specialty, 1993 and 1999



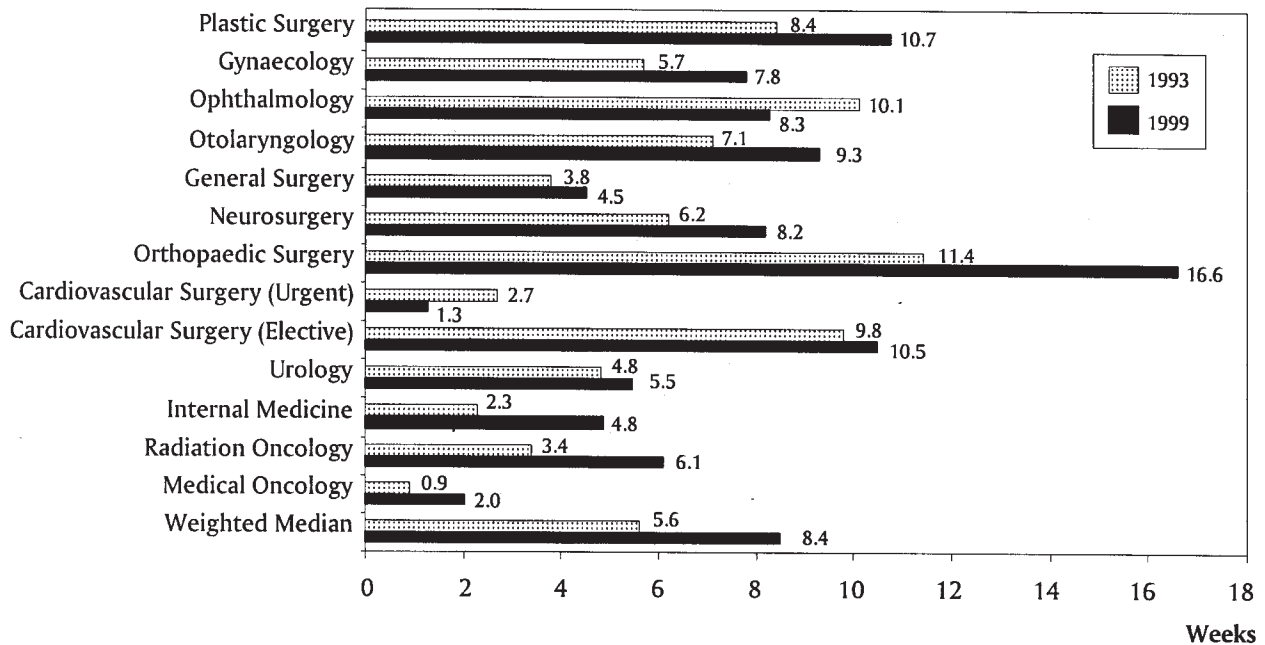
Source: The Fraser Institute, annual waiting list survey, 1994 and 2000.

Graph 3: Median Wait between Appointment with Specialist and Treatment, by Province, 1993 and 1999



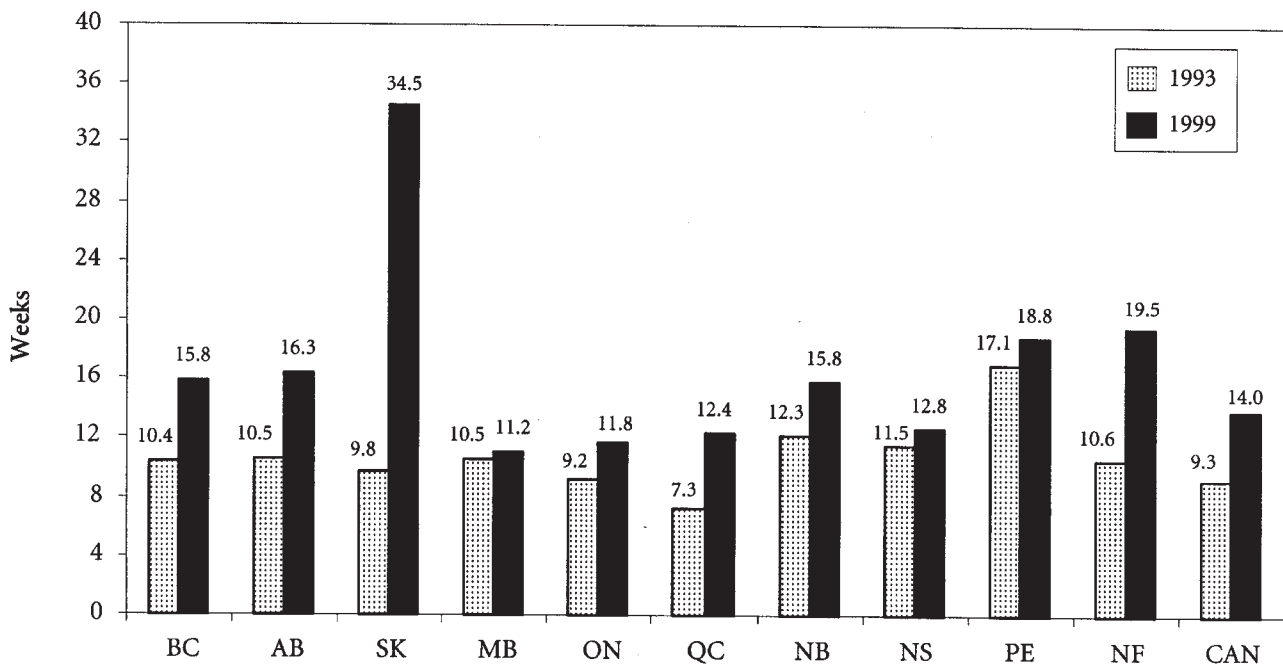
Source: The Fraser Institute, annual waiting list survey, 1994 and 2000.

Graph 4: Median Wait between Appointment with Specialist and Treatment, by Specialty, 1993 and 1999



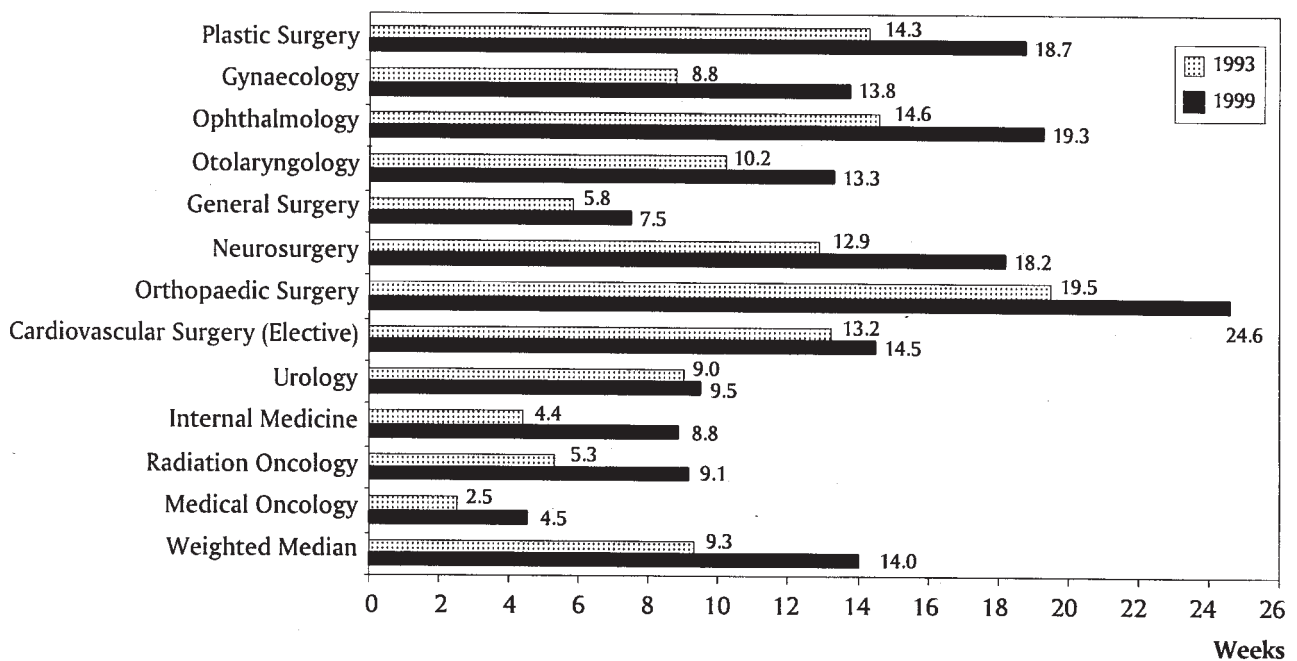
Source: The Fraser Institute, annual waiting list survey, 1994 and 2000.

Graph 5: Median Wait between Referral by GP and Treatment, by Province, 1993 and 1999



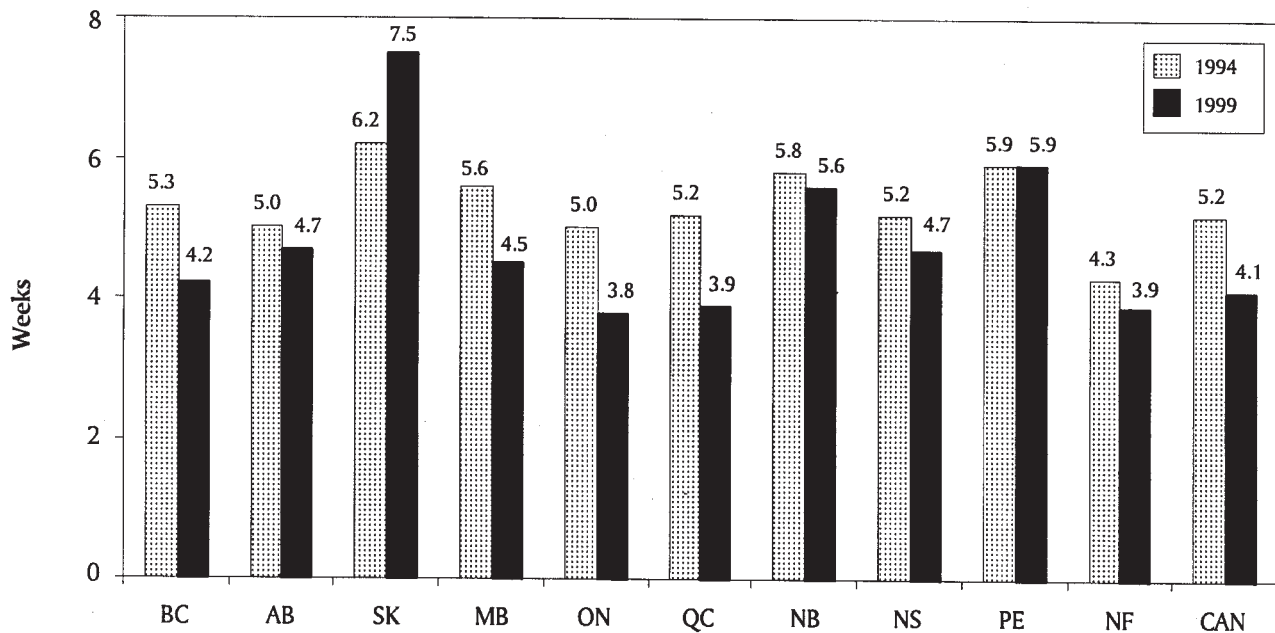
Source: The Fraser Institute, annual waiting list survey, 1994 and 2000.

Graph 6: Median Wait between Referral by GP and Treatment, by Specialty, 1993 and 1999



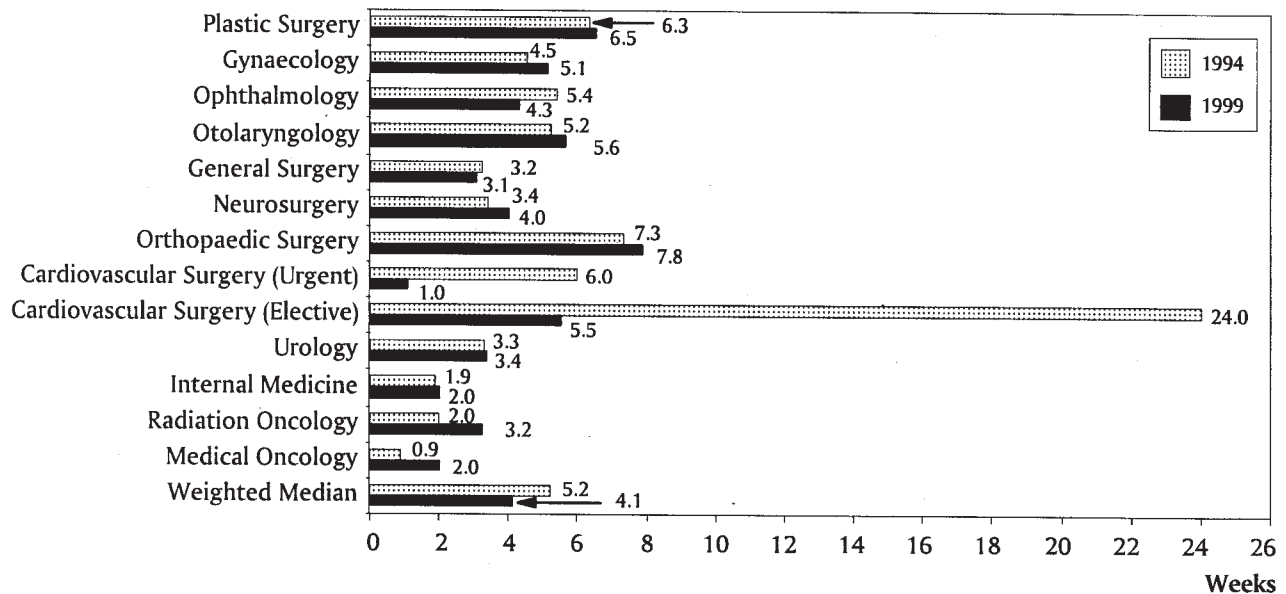
Source: The Fraser Institute, annual waiting list survey, 1994 and 2000.

Graph 7: Median Reasonable Wait between Appointment with Specialist and Treatment, by Province, 1994 and 1999



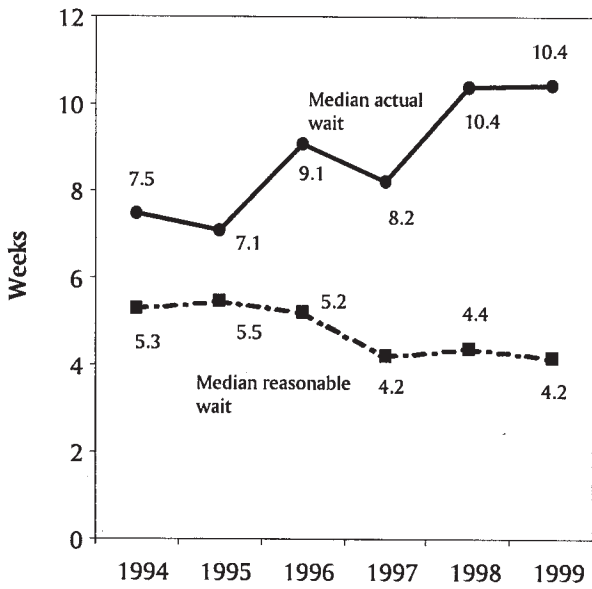
Source: The Fraser Institute, annual waiting list survey, 1995 and 2000.

Graph 8: Median Reasonable Wait between Appointment with Specialist and Treatment, by Specialty, 1994 and 1999



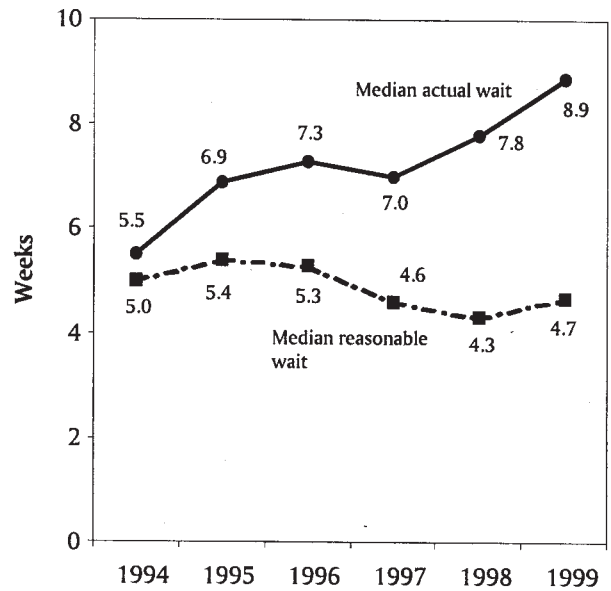
Source: The Fraser Institute, annual waiting list survey, 1995 and 2000. Note that the data for cardiovascular surgery for 1994 are from the Ontario panel of specialists while the 1999 data are from our national specialist survey. See the section "Analysis of Cardiovascular Surgery" for more information.

Graph 9: British Columbia—Actual vs. Reasonable Waits between Appointment with



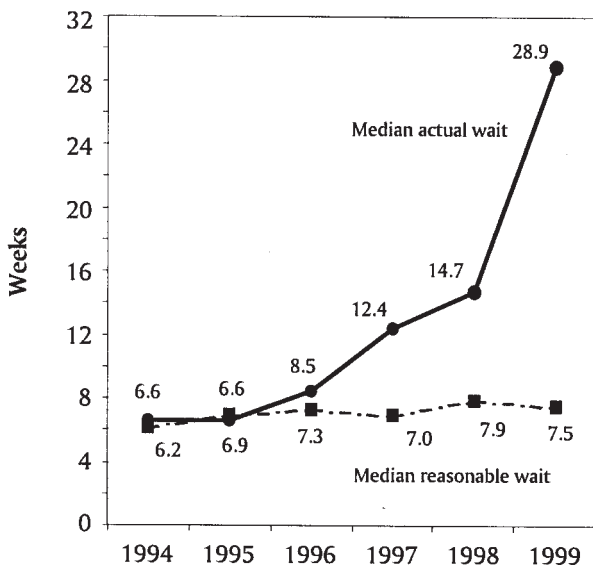
Source: The Fraser Institute, annual waiting list survey, 1995 through 2000.

Graph 10: Alberta—Actual vs. Reasonable Waits between Appointment with Specialist and Treatment, 1994 through 1999



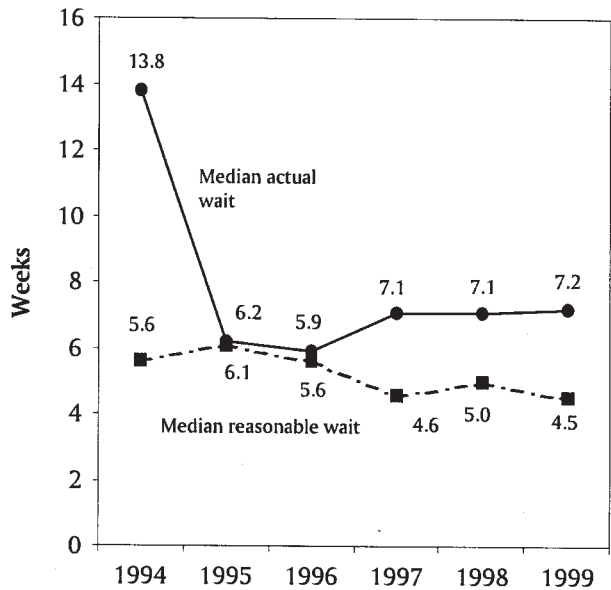
Source: The Fraser Institute, annual waiting list survey, 1995 through 2000.

Graph 11: Saskatchewan—Actual vs. Reasonable Waits between Appointment with Specialist and Treatment, 1994 through 1999



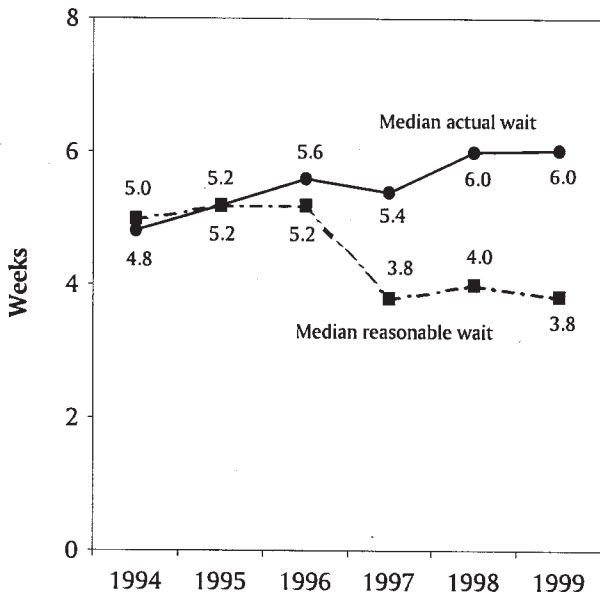
Source: The Fraser Institute, annual waiting list survey, 1995 through 2000

Graph 12: Manitoba—Actual vs. Reasonable Waits between Appointment with Specialist and Treatment, 1994 through 1999



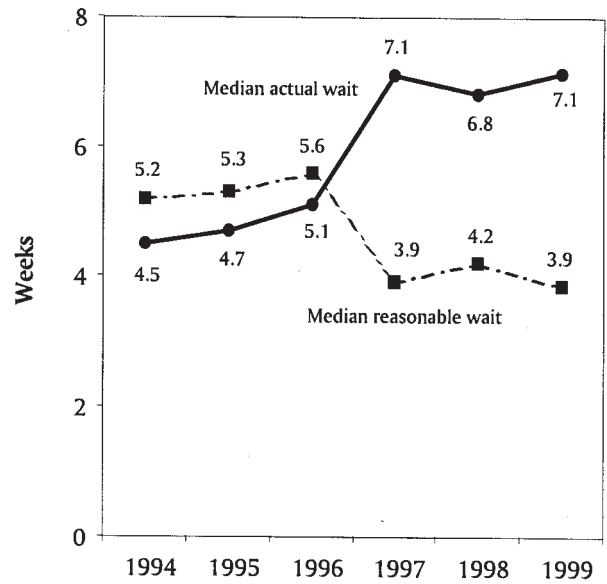
Source: The Fraser Institute, annual waiting list survey, 1995 through 2000.

Graph 13: Ontario—Actual vs. Reasonable Waits between Appointment with Specialist and Treatment, 1994 through 1999



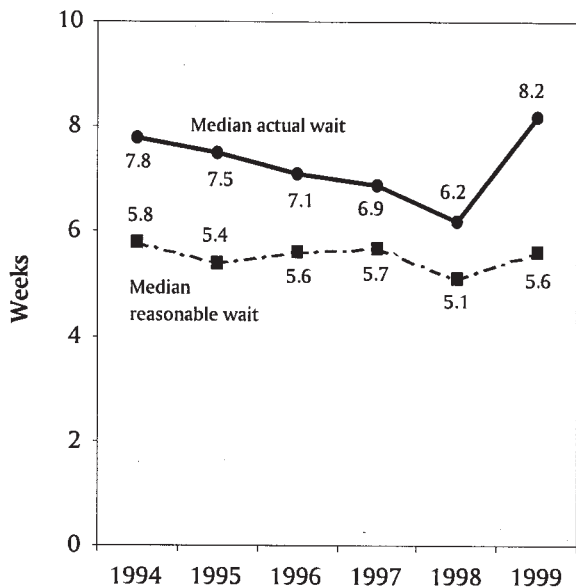
Source: The Fraser Institute, annual waiting list survey, 1995 through 2000.

Graph 14: Quebec—Actual vs. Reasonable Waits between Appointment with Specialist and Treatment, 1994 through 1999



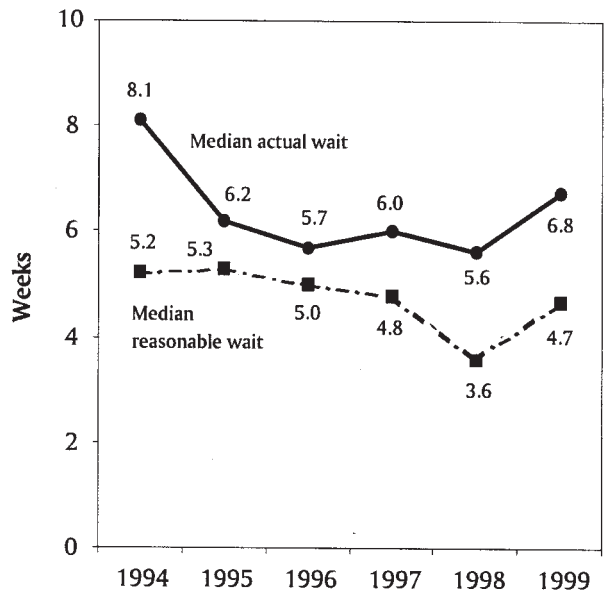
Source: The Fraser Institute, annual waiting list survey, 1995 through 2000.

Graph 15: New Brunswick—Actual vs. Reasonable Waits between Appointment with Specialist and Treatment, 1994 through 1999



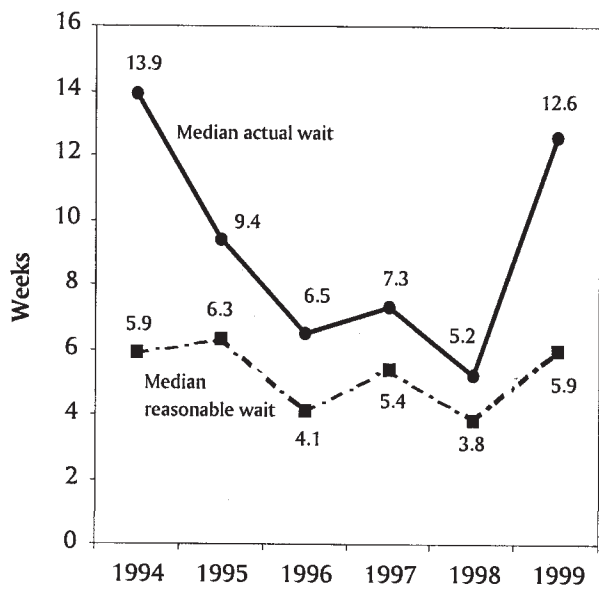
Source: The Fraser Institute, annual waiting list survey, 1995 through 2000.

Graph 16: Nova Scotia—Actual vs. Reasonable Waits between Appointment with Specialist and Treatment, 1994 through 1999



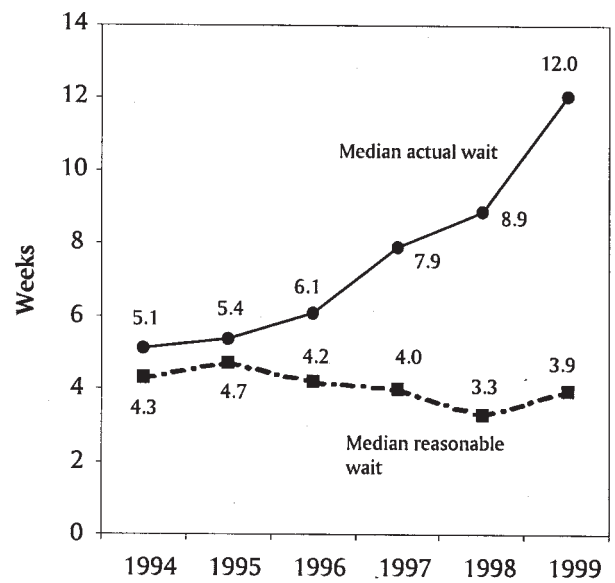
Source: The Fraser Institute, annual waiting list survey, 1995 through 2000.

Graph 17: Prince Edward Island—Actual vs. Reasonable Waits between Appointment with Specialist and Treatment, 1994 through 1999



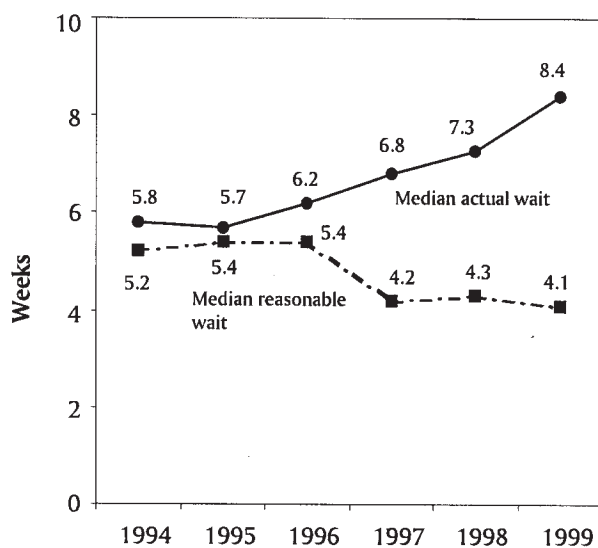
Source: The Fraser Institute, annual waiting list survey, 1995 through 2000.

Graph 18: Newfoundland—Actual vs. Reasonable Waits between Appointment with Specialist and Treatment, 1994 through 1999



Source: The Fraser Institute, annual waiting list survey, 1995 through 2000.

Graph 19: Canada—Actual vs. Reasonable Waits between Appointment with Specialist and Treatment, 1994 through 1999



Source: The Fraser Institute, annual waiting list survey, 1995 through 2000.

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF	Total
Plastic Surgery	39%	22%	33%	40%	30%	21%	38%	50%	100%	50%	29%
Gynaecology	27%	26%	32%	20%	21%	22%	26%	25%	67%	23%	23%
Ophthalmology	27%	30%	38%	25%	27%	23%	40%	24%	25%	36%	27%
Otolaryngology	27%	29%	38%	30%	30%	21%	29%	37%	—	25%	27%
General Surgery	24%	21%	29%	22%	26%	21%	29%	27%	43%	24%	24%
Neurosurgery	28%	41%	40%	80%	22%	26%	50%	50%	—	33%	29%
Orthopaedic Surgery	24%	33%	22%	20%	30%	22%	48%	41%	67%	29%	28%
Cardiovascular Surgery	29%	23%	20%	0%	24%	20%	75%	20%	—	50%	24%
Urology	33%	21%	25%	26%	29%	22%	29%	25%	100%	50%	27%
Internal Medicine	21%	23%	26%	22%	20%	20%	28%	20%	29%	26%	21%
Radiation Oncology	9%	23%	33%	20%	31%	24%	17%	22%	—	50%	24%
Medical Oncology	21%	22%	25%	67%	21%	22%	33%	25%	100%	—	22%
Total	25%	25%	29%	24%	25%	21%	33%	27%	50%	29%	25%

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF	Total
Plastic Surgery	23	8	5	4	49	26	5	5	1	1	127
Gynaecology	48	31	12	11	130	84	8	10	4	5	343
Ophthalmology	46	24	8	7	106	65	10	10	1	4	281
Otolaryngology	20	10	5	6	62	42	4	7	0	2	158
General Surgery	40	25	15	13	143	102	10	15	3	5	371
Neurosurgery	9	7	2	4	17	14	3	3	0	1	60
Orthopaedic Surgery	36	32	5	7	120	63	13	11	2	5	294
Cardiovascular Surgery	6	3	1	0	13	11	3	1	0	1	39
Urology	22	8	4	5	61	31	6	5	1	3	146
Internal Medicine	56	48	17	26	101	81	10	18	2	9	368
Radiation Oncology	4	6	2	1	36	14	1	2	0	2	68
Medical Oncology	7	4	1	2	18	25	1	1	1	0	60
Total	317	206	77	86	856	558	74	88	15	38	2,315

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF	Total
Plastic Surgery	59	36	15	10	163	122	13	10	1	2	431
Gynaecology	180	121	37	55	629	386	31	40	6	22	1,507
Ophthalmology	169	81	21	28	391	286	25	41	4	11	1,057
Otolaryngology	73	34	13	20	210	197	14	19	0	8	588
General Surgery	165	121	52	60	557	488	35	55	7	21	1,561
Neurosurgery	32	17	5	5	77	54	6	6	0	3	205
Orthopaedic Surgery	153	98	23	35	395	281	27	27	3	17	1,059
Cardiovascular Surgery	21	13	5	5	54	54	4	5	0	2	163
Urology	66	38	16	19	214	143	21	20	1	6	544
Internal Medicine	269	209	65	118	495	415	36	89	7	34	1,737
Radiation Oncology	45	26	6	5	118	59	6	9	0	4	278
Medical Oncology	34	18	4	3	87	116	3	4	1	0	270
Total	1,266	812	262	363	3,390	2,601	221	325	30	130	9,400

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF	CAN
Plastic Surgery	12.0	12.0	6.0	18.0	6.0	3.0	19.0	16.0	8.0	12.0	8.0
Gynaecology	3.0	8.0	3.0	2.3	6.0	6.0	4.5	6.0	7.0	6.0	6.0
Ophthalmology	5.0	9.0	12.0	5.5	12.0	12.0	16.0	12.0	10.0	24.0	11.0
Otolaryngology	3.0	14.0	3.0	8.0	6.0	3.5	2.5	5.5	—	6.0	4.0
General Surgery	4.0	3.5	3.5	2.0	3.0	3.0	5.0	3.0	2.0	6.5	3.0
Neurosurgery	9.0	26.0	12.0	16.0	10.0	8.0	14.0	10.0	—	5.0	10.0
Orthopaedic Surgery	12.0	12.0	6.0	6.3	8.0	7.0	12.0	8.0	4.3	10.0	8.0
Cardiovascular Surgery	4.0	4.0	2.5	—	3.5	2.0	9.0	0.0	—	6.0	4.0
Urology	4.5	8.0	10.0	2.0	4.5	4.0	6.5	3.0	14.0	7.0	4.0
Internal Medicine	4.0	4.0	6.0	3.0	3.0 ¹	5.0	2.5	5.0	7.5	3.5	4.0
Radiation Oncology	4.0	4.0	3.5	2.0	3.0 ¹	2.0	1.0	0.0	—	2.0	3.0
Medical Oncology	2.0	5.0	3.0	4.8	2.5	2.0	3.0	4.0	3.0	—	2.5
Weighted Median	5.4	7.4	5.6	4.0	5.8	5.3	7.6	6.0	6.2	7.5	5.6

¹Cancer Care Ontario data show a median wait of 2.4 weeks for radiation oncology and 2.7 weeks for medical oncology as of December 1999.

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Mammoplasty	32.0	20.5	43.0	26.0	12.0	6.0	13.0	52.0	72.0	156.0
Neurolysis	9.0	12.0	24.0	23.0	7.0	5.0	6.0	8.0	24.0	8.0
Blepharoplasty	12.0	8.0	7.5	12.0	5.0	6.0	13.0	16.0	24.0	52.0
Rhinoplasty	16.0	9.0	46.0	11.0	6.0	6.0	12.8	26.0	24.0	156.0
Scar Revision	12.0	14.0	15.5	27.0	7.0	7.0	13.0	48.0	24.0	52.0
Hand Surgery	12.0	12.5	20.0	26.0	6.0	6.0	8.0	12.0	24.0	6.0
Craniofacial Procedures	12.0	20.0	30.0	40.0	5.0	7.0	7.0	20.5	—	—
Skin Cancer and Other Tumors	8.0	3.3	5.3	9.5	4.0	4.0	5.0	4.0	24.0	4.0
Weighted Median ¹	17.4 ²	14.6	26.7	23.5	8.1	5.9	11.7 ³	31.5	26.5	92.8

¹Weighted median does not include craniofacial procedures or skin cancer and other tumors.
²British Columbia Ministry of Health data show a median wait of 4.7 weeks for plastic surgery in May 2000.
³New Brunswick Department of Health and Wellness data show an average wait of 18.52 weeks for plastic surgery as of December 31, 1999.

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Dilation and Curettage	5.5	5.0	6.5	4.0	4.0	4.0	8.0	4.0	4.5	4.0
Tubal Ligation	11.0	10.0	25.0	6.0	6.0	6.0	9.0	6.0	6.0	7.0
Hysterectomy (Vaginal/Abdominal)	12.0	10.5	42.0	6.0	7.0	6.0	10.0	8.0	6.5	7.0
Vaginal Repair	12.0	11.0	42.0	6.0	7.0	7.0	10.0	7.5	7.0	7.0
Tuboplasty	18.0	10.0	48.0	6.0	7.0	11.0	13.0	11.0	5.0	9.0
Laparoscopic Procedures	8.0	8.0	18.0	6.0	6.0	5.0	9.0	6.5	4.0	5.0
Hysteroscopic Procedures	8.0	8.0	24.0	6.0	6.0	4.0	9.0	4.5	4.0	4.5
Weighted Median ¹	12.1 ²	9.9	37.6	5.9	6.8	6.2	10.0 ³	7.8	6.0	6.8

¹Weighted median does not include hysteroscopic procedures.
²British Columbia Ministry of Health data show a median wait of 3.7 weeks for gynaecology in May 2000.
³New Brunswick Department of Health and Wellness data show an average wait of 11.31 weeks for gynaecology as of December 31, 1999.

Table 5: Ophthalmology (1999)—Median Patient Wait for Treatment after Appointment with Specialist (in Weeks)

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Cataract Removal	16.0 ²	12.0	26.0	12.0	16.0	20.0	13.5	20.0	16.0	10.0
Cornea Transplant	52.0 ²	50.0	55.0	28.0	27.0	38.0	43.0	52.0	—	14.0
Cornea—Pterygium	10.0	9.0	12.0	12.0	16.0	12.0	9.5	6.0	16.0	4.5
Iris, Ciliary Body, Sclera, Anterior Chamber	12.0	8.0	9.5	16.0	12.0	9.5	11.0	—	—	6.0
Retina, Choroid, Vitreous	2.5	2.0	1.3	0.0	4.0	8.0	4.0	3.0	—	0.6
Lacrimal Duct	12.0	10.0	27.8	12.0	12.0	20.0	16.0	8.0	—	12.0
Strabismus	15.5	10.0	9.5	16.0	16.0	13.5	8.0	12.0	16.0	18.0
Operations on Eyelids	5.5	7.0	20.0	14.0	10.0	9.0	9.5	6.5	16.0	12.0
Glaucoma	7.0	10.0	8.0	12.0	12.0	6.0	7.0	4.0	16.0	3.5
Weighted Median ¹	5.6 ²	3.7	12.5	4.6	7.8	14.5	11.0 ³	3.9	16.0	6.9

¹Weighted median does not include cornea transplant or operations for glaucoma.

²British Columbia Ministry of Health data show a median wait of 11.3 weeks for cataract surgery, 19.0 weeks for corneal transplant surgery, and 9.1 weeks for “ophthalmological surgery” in May 2000.

³New Brunswick Department of Health and Wellness data show an average wait of 14.05 weeks for ophthalmology as of December 31, 1999.

Table 6: Otolaryngology (1999)—Median Patient Wait for Treatment after Appointment with Specialist (in Weeks)

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Myringotomy	8.0	8.0	5.0	8.0	6.0	3.5	8.5	3.0	—	6.0
Tympanoplasty	12.0	12.0	52.0	9.0	8.0	6.0	12.0	10.0	—	28.0
Thyroid, Parathyroid, and Other Endocrine Glands	10.0	8.0	52.0	17.5	8.0	4.0	8.0	11.0	—	20.0
Tonsillectomy and/or Adenoidectomy	16.0	16.0	52.0	10.0	8.0	6.0	8.5	11.0	—	18.0
Rhinoplasty and/or Septal Surgery	19.0	12.0	52.0	12.0	8.0	7.0	12.0	13.3	—	38.0
Operations on Nasal Sinuses	12.0	12.0	52.0	10.0	8.0	7.0	12.0	12.3	—	24.0
Weighted Median	14.4 ¹	12.7	51.6	11.7	8.0	5.4	9.0 ²	11.1	—	21.2

¹British Columbia Ministry of Health data show a median wait of 5.7 weeks for otolaryngology in May 2000.

²New Brunswick Department of Health and Wellness data show an average wait of 17.21 weeks for otolaryngology as of December 31, 1999.

Table 7: General Surgery (1999)—Median Patient Wait for Treatment after Appointment with Specialist (in Weeks)

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Hernia/Hydrocele	11.0	8.0	52.0	5.0	4.0	8.0	4.8	3.0	24.0	9.0
Cholecystectomy	10.0	8.0	52.0	3.8	4.0	6.0	3.8	3.0	24.0	7.0
Colonoscopy	8.0	6.0	4.0	4.0	4.0	4.0	3.0	5.0	9.5	5.0
Intestinal Operations	5.0	4.0	4.0	3.0	3.0	3.0	2.0	2.0	6.0	4.0
Haemorrhoidectomy	15.0	10.0	52.0	6.0	4.0	6.0	4.8	3.0	24.0	5.0
Breast Biopsy	3.0	2.0	2.5	2.0	2.5	2.5	1.5	2.0	3.0	2.0
Mastectomy	3.0	2.0	3.0	2.5	2.0	2.0	2.0	1.8	2.0	3.3
Bronchus and Lung	5.0	4.0	4.0	1.8	4.0	2.5	—	2.0	5.0	2.0
Aneurysm Surgery	6.0	4.0	2.0	2.5	4.0	6.0	—	2.5	—	2.0
Varicose Veins	30.0	8.0	50.0	10.0	6.0	8.5	3.0	3.0	24.0	8.0
Weighted Median ¹	7.8 ²	5.7	29.1	3.6	3.5	4.7	3.0 ³	2.5	14.6	5.9

¹Weighted median does not include aneurysm surgery.

²British Columbia Ministry of Health data show a median wait for general surgery of 3.1 weeks in May 2000.

³New Brunswick Department of Health and Wellness data show an average wait for general surgery of 9.44 weeks as of December 31, 1999.

Table 8: Neurosurgery (1999)—Median Patient Wait for Treatment after Appointment with Specialist (in Weeks)

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Peripheral Nerve	4.0	6.5	5.5	3.5	7.0	4.5	12.0	6.0	—	3.0
Disc Surgery/Laminectomy	11.5	12.0	9.5	20.0	8.0	6.0	14.0	10.0	—	3.0
Elective Cranial Bone Flap	8.0	7.5	5.3	7.0	5.0	4.0	11.0	6.0	—	1.5
Aneurysm Surgery	10.0	8.0	7.0	0.0	5.0	4.0	10.0	6.0	—	1.5
Carotid Endarterectomy	24.0	4.0	3.5	0.0	4.0	4.0	7.0	4.0	—	0.0
Weighted Median ¹	10.0 ²	9.7	7.9	13.8	6.7	5.5	12.7 ³	8.2	—	2.4

¹Weighted median does not include aneurysm surgery or carotid endarterectomy.

²British Columbia Ministry of Health data show a median wait for neurosurgery of 3.4 weeks in May 2000.

³New Brunswick Department of Health and Wellness data show an average wait for neurosurgery of 5.75 weeks as of December 31, 1999.

Table 9: Orthopaedic Surgery (1999)—Median Patient Wait for Treatment after Appointment with Specialist (in Weeks)

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Meniscectomy/Arthroscopy	12.0	12.0	32.0	13.0	10.0	12.0	6.0	8.0	6.5	4.0
Removal of Pins	12.0	12.0	20.0	10.0	10.0	12.0	16.0	8.0	11.5	4.0
Arthroplasty (Hip, Knee, etc.)	27.0 ²	25.0	64.0	16.0	16.0	24.0	12.0	18.0	23.0	7.5
Arthroplasty (Interphalageal)	16.0	13.0	58.0	13.0	10.5	16.0	12.5	16.0	8.0	5.0
Hallux Valgus/Hammer Toe	18.0	13.0	52.0	14.0	8.0	12.0	12.0	9.5	12.0	5.0
Digit Neuroma	12.0	12.0	20.0	16.0	8.0	12.0	12.0	9.0	6.0	5.0
Rotator Cuff Repair	20.0	12.0	8.0	16.0	12.0	12.0	12.0	8.0	7.0	4.5
Ostectomy (All Types)	17.0	17.0	52.0	16.0	9.0	12.0	12.0	8.0	8.0	4.0
Routine Spinal Instability	32.0	17.0	64.0	14.0	13.0	19.0	16.0	24.0	24.0	8.5
Weighted Median ¹	22.4 ²	20.6	55.6	15.7	13.4	18.5	11.9 ³	15.9	18.7	5.9

¹Weighted median does not include removal of pins or routine spinal instability.
²British Columbia Ministry of Health data show a median wait for hip replacement surgery of 16.4 weeks, knee replacement surgery of 18.7 weeks, and orthopaedic surgery of 7.0 weeks in May 2000.
³New Brunswick Department of Health and Wellness data show an average wait for orthopaedic surgery of 15.51 weeks as of December 31, 1999.

Table 10: Cardiovascular Surgery (1999)—Median Patient Wait for Treatment after Appointment with Specialist (in Weeks)

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF	
EMERGENT	Coronary Artery Bypass	3.5	1.3	0.0	—	0.0	0.1	0.5	0.0	—	1.0
	Valves & Septa of the Heart	3.5	1.0	0.0	—	0.1	0.6	0.0	0.0	—	1.0
	Aneurysm Surgery	1.0	1.0	0.0	—	0.1	0.0	0.0	0.0	—	1.0
	Carotid Endarterectomy	—	—	0.0	—	3.0	0.0	0.0	—	—	1.0
	Pacemaker Operations	1.0	0.0	0.0	—	0.6	0.3	0.0	0.0	—	—
URGENT	Coronary Artery Bypass	7.0	0.0	1.0	—	1.0	0.2	4.0	4.0	—	4.0
	Valves & Septa of the Heart	7.0	2.0	1.0	—	3.0	0.0	—	4.0	—	8.0
	Aneurysm Surgery	4.0	—	1.0	—	1.0	0.0	1.0	4.0	—	4.0
	Carotid Endarterectomy	2.0 ¹	—	1.0	—	4.0	0.3	2.0	—	—	3.0
	Pacemaker Operations	1.5	2.3	1.0	—	1.3	0.1	1.0	1.0	—	—
ELECTIVE	Coronary Artery Bypass	9.0	12.0	8.7	—	8.5 ²	12.0	35.0	12.0	—	52.0
	Valves & Septa of the Heart	9.0	12.0	8.7	—	8.0	18.0	40.0	12.0	—	52.0
	Aneurysm Surgery	9.0	—	13.7	—	8.0	13.0	41.0	12.0	—	12.0
	Carotid Endarterectomy	6.0 ¹	—	11.8	—	6.0	16.0	72.0	—	—	8.0
	Pacemaker Operations	6.0	12.0	2.8	—	4.0	4.0	6.0	3.0	—	—

¹British Columbia Ministry of Health data show a median wait for carotid endarterectomy (of unspecified urgency) of 3.3 weeks, in May 2000.

²Cardiac Care Network of Ontario data show a median wait for elective coronary artery bypass of 5.0 weeks as of May 31, 2000.

Table 11: Urology (1999)—Median Patient Wait for Treatment after Appointment with Specialist (in Weeks)

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Non-radical Prostatectomy	12.0	6.5	52.0	5.5	5.0	5.0	9.0	6.0	9.0	5.5
Radical Prostatectomy	6.0	6.0	4.5	5.5	6.0	4.0	4.0	3.0	5.0	3.0
Transurethral Resection—Bladder	5.0	4.0	4.0	3.5	4.0	3.0	3.5	4.0	5.0	3.0
Radical Cystectomy	5.0	4.0	3.8	6.5	6.0	3.5	6.0	6.0	7.0	3.0
Cystoscopy	10.0	2.0	3.0	2.5	3.0	3.3	8.0	4.0	—	4.0
Hernia/Hydrocele	16.0	7.0	52.0	4.0	6.0	7.0	9.0	8.0	10.0	8.0
Bladder Fulguration	5.0	4.0	5.0	3.5	4.0	2.0	4.5	4.0	—	2.3
Ureteral Reimplantation for Reflux	16.0	10.0	52.0	5.5	7.0	8.0	11.5	1.0	8.0	4.5
Weighted Median ¹	10.9 ²	5.3	30.4	4.5	4.6	4.4	7.5 ³	5.6	8.5	4.8

¹Weighted median does not include radical prostatectomy, radical cystectomy, or ureteral reimplantation for reflux.

²British Columbia Ministry of Health data show a median wait for urology of 4.0 weeks in May 2000.

³New Brunswick Department of Health and Wellness data show an average wait for urology of 6.05 weeks as of December 31, 1999.

Table 12: Internal Medicine (1999)—Median Patient Wait for Treatment after Appointment with Specialist (in Weeks)

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Colonoscopy	6.0	6.0	4.0	3.5	4.0	4.0	2.0	4.3	—	2.3
Angiography/Angioplasty	8.0	7.0	8.0	7.0	6.5	5.0	4.5	5.5	—	13.0
Bronchoscopy	4.0	4.0	2.0	3.0	2.0	2.5	4.0	3.5	—	1.5
Gastrosocopy	6.0	6.0	3.0	3.5	3.0	4.0	2.0	3.5	3.0	1.5
Weighted Median	7.0	6.3	5.2	4.7	4.8	4.1	3.0	5.0	3.0	5.7

Table 13: Radiation Oncology (1999)—Median Patient Wait for Treatment after Appointment with Specialist (in Weeks)

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Cancer of the Larynx	6.5	3.3	3.0	—	3.0	4.0	3.0	3.3	—	5.5
Cancer of the Cervix	5.0	3.3	4.0	—	3.0	4.0	2.0	3.0	—	6.0
Lung Cancer	5.0	3.5	3.5	—	3.0	5.0	4.0	3.3	—	6.3
Prostate Cancer	10.5	6.0	6.5	—	6.0	14.0	6.0	4.0	—	7.0
Breast Cancer	5.0	8.5	6.5	4.0	6.0	13.0	4.0	3.5	—	8.5
Early Side Effects from Treatment	1.0	1.0	0.1	0.0	1.0	0.5	2.0	0.5	—	2.0
Late Side Effects from Treatment	1.0	1.5	3.0	0.0	1.5	1.0	2.0	0.5	—	13.5
Weighted Median ¹	6.9 ²	6.0	5.5	4.0	4.9 ³	9.5	4.6	3.6	—	7.3

¹Weighted median does not include early or late side effects from treatment.

²British Columbia Ministry of Health data show a median wait for radiotherapy of 2.3 weeks in May 2000.

³Cancer Care Ontario data show a median wait for radiotherapy of 3.5 weeks in December 1999.

Table 14: Medical Oncology (1999)—Median Patient Wait for Treatment after Appointment with Specialist (in Weeks)

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Cancer of the Larynx	2.0	4.5	—	1.2	2.0	1.3	2.0	4.5	2.0	—
Cancer of the Cervix	2.0	5.0	—	—	2.5	1.3	2.0	—	2.0	—
Lung Cancer	2.0	5.0	1.0	4.8	2.5	1.0	2.0	3.0	2.0	—
Breast Cancer	2.0	5.5	1.0	7.0	2.0	1.3	2.5	4.0	2.0	—
Side Effects from Treatment	1.0	0.1	0.0	0.2	0.0	0.0	0.0	0.5	0.1	—
Weighted Median ¹	2.0 ²	5.2	1.0	5.7	2.3 ³	1.1	2.2	3.5	2.0	—

¹Weighted median does not include side effects from treatment.

²British Columbia Ministry of Health data show “no appreciable” median wait for chemotherapy in May 2000.

³Cancer Care Ontario data show a median wait for medical oncology of 2.0 weeks in December 1999.

Table 15: Plastic Surgery (1999)—Estimated Number of Patients Waiting for Treatment after Appointment with Specialist

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Mammoplasty	306	136	78	28	217	124	59	29	7	30
Neurolysis	68	50	49	29	144	61	16	18	4	4
Blepharoplasty	16	5	7	3	14	10	2	5	0	1
Rhinoplasty	181	20	75	16	93	94	26	99	30	200
Scar Revision	133	114	55	93	202	88	34	110	7	54
Hand Surgery	37	16	21	13	31	25	3	6	1	1
Total	740	340	284	182	700	403	141 ¹	266	48	289
Total/100,000 population	18	11	28	16	6	5	19	28	35	53

Note: Totals may not match sums of numbers for individual procedures due to rounding.
¹New Brunswick Department of Health and Wellness data show 1,461 patients waiting for plastic surgery as of December 31, 1999.

Table 16: Gynaecology (1999)—Estimated Number of Patients Waiting for Treatment after Appointment with Specialist

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Dilation & Curettage	56	57	39	8	69	51	16	5	2	10
Tubal Ligation	49	44	227	67	56	30	37	30	6	14
Hysterectomy (Vaginal/Abdominal)	1,989	937	1,345	289	2,926	1,937	649	345	31	180
Vaginal Repair	105	65	94	20	142	139	38	17	1	9
Tuboplasty	329	163	194	44	352	292	57	30	4	14
Laparoscopic Procedures	106	67	74	40	222	207	45	25	2	13
Total	2,634	1,334	1,972	467	3,766	2,656	842 ¹	452	47	239
Total/100,000 population	65	45	192	41	33	36	112	48	34	44

Note: Totals may not match sums of numbers for individual procedures due to rounding.
¹New Brunswick Department of Health and Wellness data show 1,716 patients waiting for gynaecology surgery as of December 31, 1999.

Table 17: Ophthalmology (1999)—Estimated Number of Patients Waiting for Treatment after Appointment with Specialist

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Cataract Removal	139	32	108	15	299	935	13	20	0	12
Cornea—Pterygium	67	21	25	26	144	155	2	12	3	3
Iris, Ciliary Body, Sclera, Anterior Chamber	50	16	31	12	249	108	7	—	—	3
Retina, Choroid, Vitreous	203	123	7	—	357	293	3	45	—	1
Lacrimal Duct	46	6	38	2	63	125	13	5	—	11
Strabismus	22	1	15	1	14	66	0	1	0	2
Operations on Eyelids	29	10	14	9	44	55	5	6	1	2
Total	556	210	238	65	1,170	1,738	44 ¹	90	4	33
Total/100,000 population	14	7	23	6	10	24	6	10	3	6

Note: Totals may not match sums of numbers for individual procedures due to rounding.
¹New Brunswick Department of Health and Wellness data show 1,769 patients waiting for ophthalmology treatment as of December 31, 1999.

Table 18: Otolaryngology (1999)—Estimated Number of Patients Waiting for Treatment after Appointment with Specialist

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Myringotomy	16	10	2	4	32	23	8	4	—	2
Tympanoplasty	62	26	68	7	90	69	45	25	—	80
Thyroid & Other Endocrine Glands	235	189	212	102	657	232	38	80	—	72
Tonsillectomy &/or Adenoidectomy	1,145	734	1,856	252	1,213	213	299	576	—	556
Rhinoplasty &/or Septal Surgery	238	28	87	34	183	128	51	87	—	195
Operations on Nasal Sinuses	204	121	146	11	196	96	28	83	—	26
Total	1,900	1,108	2,370	411	2,371	761	468 ¹	855	—	930
Total/100,000 population	47	37	231	36	21	10	62	91	—	172

Note: Totals may not match sums of numbers for individual procedures due to rounding.
¹New Brunswick Department of Health and Wellness data show 1,694 patients waiting for otolaryngology treatment as of December 31, 1999.

Table 19: General Surgery (1999)—Estimated Number of Patients Waiting for Treatment after Appointment with Specialist

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Hernia/Hydrocele	1,381	497	1,649	237	1,007	1,199	246	112	72	137
Cholecystectomy	2,304	819	2,339	231	1,628	1,806	564	244	136	225
Colonoscopy	73	63	24	11	220	241	24	19	7	19
Intestinal Operations	929	474	274	125	1,501	813	154	163	39	64
Haemorrhoidectomy	427	122	287	38	198	244	44	19	7	22
Breast Biopsy	112	39	16	14	207	121	28	6	2	5
Mastectomy	201	72	68	30	317	197	21	23	7	18
Bronchus & Lung	166	134	38	26	351	282	—	25	9	10
Varicose Veins	206	63	203	42	190	164	7	5	2	25
Total	5,799	2,284	4,898	754	5,618	5,068	1,088 ¹	617	282	525
Total/100,000 population	144	77	476	66	49	69	144	66	204	97

Note: Totals may not match sums of numbers for individual procedures due to rounding.

¹New Brunswick Department of Health and Wellness data show 2,145 patients waiting for general surgery as of December 31, 1999.

Table 20: Neurosurgery (1999)—Estimated Number of Patients Waiting for Treatment after Appointment with Specialist

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Peripheral Nerve	4	16	4	2	75	29	15	5	—	2
Disc Surgery/Laminectomy	0	467	161	146	1,115	1,121	128	87	—	12
Elective Cranial Bone Flap	60	155	51	75	598	253	56	47	—	5
Total	63	638	216	224	1,788	1,402	200 ¹	139	—	19
Total/100,000 population	2	22	21	20	16	19	26	15	—	4

Note: Totals may not match sums of numbers for individual procedures due to rounding.

¹New Brunswick Department of Health and Wellness data show 96 patients waiting for neurosurgery as of December 31, 1999.

Table 21: Orthopaedic Surgery (1999)—Estimated Number of Patients Waiting for Treatment after Appointment with Specialist

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Meniscectomy/Arthroscopy	68	51	58	8	62	42	9	3	1	3
Arthroplasty (Hip, Knee, etc.)	2,534	1,254 ¹	1,271	401	4,603	2,201	207	358	63	47
Arthroplasty (Interphalageal)	339	172	298	49	700	547	92	70	4	14
Hallux Valgus/Hammer Toe	38	1	6	0	47	17	6	2	0	1
Digit Neuroma	100	44	36	26	108	115	16	9	0	6
Rotator Cuff Repair	55	34	29	9	76	69	8	4	0	5
Ostectomy (All Types)	541	242	400	128	832	687	83	37	3	13
Total	3,675	1,799	2,098	622	6,429	3,680	421 ²	482	71	89
Total/100,000 population	91	61	204	54	56	50	56	51	52	16

Note: Totals may not match sums of numbers for individual procedures due to rounding.

¹Alberta Ministry of Health and Wellness data show 2,130 patients waiting for hip or knee replacement as of December 31, 1999.

²New Brunswick Department of Health and Wellness data show 2,750 patients waiting for orthopaedic surgery as of December 31, 1999.

Table 22: Cardiovascular Surgery (1999)—Estimated Number of Patients Waiting for Treatment after Appointment with Specialist

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Coronary Artery Bypass	768	606	28	—	377 ²	566	88	138	—	66
Valves & Septa of the Heart	136	81	6	—	163	—	—	19	—	8
Pacemaker Operations	224	47	10	—	119	43	9	13	—	—
Total	1,127	734 ¹	44	—	659	609	97 ³	170	—	73
Total/100,000 population	28	25	4	—	6	8	13	18	—	14

Note: Totals may not match sums of numbers for individual procedures due to rounding.

¹Alberta Ministry of Health and Wellness data show 395 patients waiting for open heart surgery as of December 31, 1999.

²Cardiac Care Network of Ontario data show 1,179 patients waiting for elective coronary artery bypass surgery in May 2000.

³New Brunswick Department of Health and Wellness data show 100 patients waiting for cardiac surgery as of December 31, 1999.

Table 23: Urology (1999)—Estimated Number of Patients Waiting for Treatment after Appointment with Specialist

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Non-radical Prostatectomy	1,227	376	1,058	127	1,317	894	151	152	32	50
Transurethral Resection—Bladder	131	60	39	22	393	149	25	22	4	14
Cystoscopy	165	37	18	4	258	112	80	67	—	19
Hernia/Hydrocele	527	189	490	131	485	466	123	101	6	29
Bladder Fulguration	85	48	57	31	250	108	27	33	—	6
Total	2,135	711	1,661	317	2,703	1,729	407 ¹	374	42	118
Total/100,000 population	53	24	162	28	23	24	54	40	30	22

Note: Totals may not match sums of numbers for individual procedures due to rounding.

¹New Brunswick Department of Health and Wellness data show 865 patients waiting for urology treatment as of December 31, 1999.

Table 24: Internal Medicine (1999)—Estimated Number of Patients Waiting for Treatment after Appointment with Specialist

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Colonoscopy	110	79	23	18	165	172	16	21	—	17
Angiography/Angioplasty	627	442	99	95	1,659	758	92	253	—	151
Bronchoscopy	31	33	4	3	79	125	8	7	—	5
Gastroscopy	310	189	34	37	607	539	60	40	7	32
Total	1,078	743	160	153	2,511	1,593	177	321	7	206
Total/100,000 population	27	25	16	13	22	22	23	34	5	38

Note: Totals may not match sums of numbers for individual procedures due to rounding.

Table 25: Radiation Oncology (1999) – Estimated Number of Patients Waiting for Treatment after Appointment with Specialist

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Radiotherapy	214	146	30	34	472 ¹	455	43	37	—	39
Total/100,000 population	5	5	3	3	4	6	6	4	—	7

¹Cancer Care Ontario data show 1,224 patients waiting for radiotherapy in December 1999.

Table 26: Medical Oncology (1999)—Estimated Number of Patients Waiting for Treatment after Appointment with Specialist

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Chemotherapy	128	188	13	64	545	280	69	67	3	—
Total/100,000 population	3	6	1	6	5	4	9	7	2	—

Table 27: Estimated Number of Patients Waiting for Treatment after Appointment with Specialist (1999)—Patients Waiting Per 100,000 Population

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Plastic Surgery	18	11	28	16	6	5	19	28	35	53
Gynaecology	65	45	192	41	33	36	112	48	34	44
Ophthalmology	14	7	23	6	10	24	6	10	3	6
Otolaryngology	47	37	231	36	21	10	62	91	—	172
General Surgery	144	77	476	66	49	69	144	66	204	97
Neurosurgery	2	22	21	20	16	19	26	15	—	4
Orthopaedic Surgery	91	61	204	54	56	50	56	51	52	16
Cardiovascular Surgery	28	25	4	—	6	8	13	18	—	14
Urology	53	24	162	28	23	24	54	40	30	22
Internal Medicine	27	25	16	13	22	22	23	34	5	38
Radiation Oncology	5	5	3	3	4	6	6	4	—	7
Medical Oncology	3	6	1	6	5	4	9	7	2	—

Table 28a: Median Wait to Receive Treatment after Appointment with Specialist, by Specialty, 1999 (in Weeks)

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF	CAN
Plastic Surgery	17.4	14.6	26.7	23.5	8.1	5.9	11.7	31.5	26.5	92.8	10.7
Gynaecology	12.1	9.9	37.6	5.9	6.8	6.2	10.0	7.8	6.0	6.8	7.8
Ophthalmology	5.6	3.7	12.5	4.6	7.8	14.5	11.0	3.9	16.0	6.9	8.3
Otolaryngology	14.4	12.7	51.6	11.7	8.0	5.4	9.0	11.1	—	21.2	9.3
General Surgery	7.8	5.7	29.1	3.6	3.5	4.7	3.0	2.5	14.6	5.9	4.5
Neurosurgery	10.0	9.7	7.9	13.8	6.7	5.5	12.7	8.2	—	2.4	8.2
Orthopaedic Surgery	22.4	20.6	55.6	15.7	13.4	18.5	11.9	15.9	18.7	5.9	16.6
Cardiovascular Surgery (Urgent)	5.5 ¹	0.7	1.0	—	1.3	0.2	3.1 ²	3.3	—	4.2	1.3
Cardiovascular Surgery (Elective)	8.2 ¹	12.0	7.3	—	7.6	11.4	27.9 ²	9.8	—	52.0	10.5
Urology	10.9	5.3	30.4	4.5	4.6	4.4	7.5	5.6	8.5	4.8	5.5
Internal Medicine	7.0	6.3	5.2	4.7	4.8	4.1	3.0	5.0	3.0	5.7	4.8
Radiation Oncology	6.9	6.0	5.5	4.0	4.9	9.5	4.6	3.6	—	7.3	6.1
Medical Oncology	2.0	5.2	1.0	5.7	2.3	1.1	2.2	3.5	2.0	—	2.0
Weighted Median	10.4	8.9	28.9	7.2	6.0	7.1	8.2	6.8	12.6	12.0	8.4

¹British Columbia Ministry of Health data show a median patient wait of 3.3 weeks for cardiac surgery (of unspecified urgency) in May 2000.

²New Brunswick Department of Health and Wellness data show an average wait for cardiac surgery of 6.4 weeks as of December 31, 1999.

Table 28b: Estimated Number of Patients Waiting to Receive Treatment after Appointment with Specialist, by Specialty, 1999

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Plastic Surgery	740	340	284	182	700	403	141	266	48	289
Gynaecology	2,634	1,334	1,972	467	3,766	2,656	842	452	47	239
Ophthalmology	556	210	238	65	1,170	1,738	44	90	4	33
Otolaryngology	1,900	1,108	2,370	411	2,371	761	468	855	—	930
General Surgery	5,799	2,284	4,898	754	5,618	5,068	1,088	617	282	525
Neurosurgery	63	638	216	224	1,788	1,402	200	139	—	19
Orthopaedic Surgery	3,675	1,799	2,098	622	6,429	3,680	421	482	71	89
Cardiovascular Surgery	1,127	734	44	—	659	609	97	170	—	73
Urology	2,135	711	1,661	317	2,703	1,729	407	374	42	118
Internal Medicine	1,078	743	160	153	2,511	1,593	177	321	7	206
Radiation Oncology	214	146	30	34	472	455	43	37	—	39
Medical Oncology	128	188	13	64	545	280	69	67	3	—
Residual	11,186	5,864	8,970	1,532	13,291	11,986	1,893	1,885	256	1,688
Total	31,237	16,098	22,955	4,825	42,021	32,360	5,889	5,755	760	4,250
Proportion of Population	0.78%	0.54%	2.23%	0.42%	0.36%	0.44%	0.78%	0.61%	0.55%	0.79%

In Canada, the total estimated number of patients waiting in 1999 was 166,150, 0.54% of the population.
 Note: Provincial totals may not match sums of numbers for specialties due to rounding.

Table 29a: Comparison of Median Weeks Waited to Receive Treatment after Appointment with Specialist, by Selected Specialties, 1998 and 1999

	British Columbia		Alberta		Saskatchewan		Manitoba		Ontario			
	1999	1998	% chg	1999	1998	% chg	1999	1998	% chg	1999	1998	% chg
Plastic Surgery	17.4	17.9	-3%	14.6	13.8	6%	26.7	17.1	56%	23.5	10.8	118%
Gynaecology	12.1	10.5	15%	9.9	8.2	21%	37.6	21.4	76%	5.9	5.7	4%
Ophthalmology	5.6	11.9	-53%	3.7	5.2	-28%	12.5	14.5	-14%	4.6	16.2	-72%
Otolaryngology	14.4	13.8	5%	12.7	9.4	35%	51.6	29.9	73%	11.7	6.6	77%
General Surgery	7.8	7.6	3%	5.7	4.6	25%	29.1	9.3	213%	3.6	3.7	-2%
Neurosurgery	10.0	6.6	51%	9.7	22.9	-58%	7.9	10.7	-26%	13.8	5.6	147%
Orthopaedic Surgery	22.4	20.0	12%	20.6	18.4	12%	55.6	31.0	79%	15.7	19.5	-19%
Cardiovascular Surgery (Urgent)	5.5	6.6	-17%	0.7	2.6	-74%	1.0	2.3	-57%	—	6.0	—
Cardiovascular Surgery (Elective)	8.2	22.4	-63%	12.0	10.1	19%	7.3	17.8	-59%	—	8.0	—
Urology	10.9	9.7	13%	5.3	4.7	13%	30.4	17.4	75%	4.5	3.8	19%
Internal Medicine	7.0	6.1	14%	6.3	5.5	15%	5.2	5.0	4%	4.7	6.0	-21%
Radiation Oncology	6.9	9.5	-27%	6.0	4.3	39%	5.5	1.6	242%	4.0	7.6	-47%
Medical Oncology	2.0	1.4	43%	5.2	1.9	176%	1.0	3.8	-74%	5.7	—	—
Weighted Median	10.4	10.4	0%	8.9	7.8	14%	28.9	14.7	96%	7.2	7.1	1%

Note: Percentage changes are calculated from exact weighted medians, which have been rounded for inclusion in the table.

Table 29a: Comparison of Median Weeks Waited to Receive Treatment after Appointment with Specialist, by Selected Specialties, 1998 and 1999															
	Quebec			New Brunswick			Nova Scotia			Prince Edward Island			Newfoundland		
	1999	1998	% chg	1999	1998	% chg	1999	1998	% chg	1999	1998	% chg	1999	1998	% chg
Plastic Surgery	5.9	5.7	4%	11.7	8.5	37%	31.5	21.3	48%	26.5	—	—	92.8	10.7	767%
Gynaecology	6.2	7.3	-15%	10.0	11.4	-13%	7.8	7.1	10%	6.0	4.1	48%	6.8	5.9	16%
Ophthalmology	14.5	13.9	5%	11.0	7.9	39%	3.9	11.3	-65%	16.0	12.0	33%	6.9	4.9	41%
Otolaryngology	5.4	8.3	-35%	9.0	9.6	-7%	11.1	11.8	-6%	—	—	—	21.2	29.9	-29%
General Surgery	4.7	5.6	-16%	3.0	3.2	-5%	2.5	3.1	-19%	14.6	2.5	483%	5.9	2.7	118%
Neurosurgery	5.5	5.4	2%	12.7	15.9	-20%	8.2	7.3	12%	—	—	—	2.4	5.5	-57%
Orthopaedic Surgery	18.5	15.6	19%	11.9	7.8	53%	15.9	12.4	28%	18.7	33.3	-44%	5.9	6.2	-5%
Cardiovascular Surgery (Urgent)	0.2	1.0	-83%	3.1	—	—	3.3	—	—	—	—	—	4.2	4.0	5%
Cardiovascular Surgery (Elective)	11.4	10.2	12%	27.9	—	—	9.8	—	—	—	—	—	52.0	52.0	0%
Urology	4.4	3.5	25%	7.5	7.4	1%	5.6	4.8	16%	8.5	2.8	204%	4.8	3.1	56%
Internal Medicine	4.1	3.9	6%	3.0	5.9	-49%	5.0	4.7	7%	3.0	8.7	-66%	5.7	2.3	146%
Radiation Oncology	9.5	5.4	76%	4.6	2.2	108%	3.6	2.0	79%	—	—	—	7.3	2.2	233%
Medical Oncology	1.1	1.1	1%	2.2	—	—	3.5	0.0	—	2.0	1.0	100%	—	5.7	—
Weighted Median	7.1	6.8	5%	8.2	6.2	32%	6.8	5.6	21%	12.6	5.2	142%	12.0	8.9	35%

Note: Percentage changes are calculated from exact weighted medians, which have been rounded for inclusion in the table.

Table 29b: Comparison of Estimated Number of Patients Waiting for Treatment after Appointment with Specialist, by Speciality, 1998 and 1999															
	British Columbia		Alberta		Saskatchewan		Manitoba		Ontario						
	1999	1998	% chg	1999	1998	% chg	1999	1998	% chg	1999			1998	% chg	
Plastic Surgery	740	1,291	-43%	340	523	-35%	284	359	-21%	182	250	-27%	700	1,131	-38%
Gynaecology	2,634	2,385	10%	1,334	1,779	-25%	1,972	1,348	46%	467	683	-32%	3,766	4,061	-7%
Ophthalmology	556	1,101	-49%	210	326	-36%	238	501	-52%	65	356	-82%	1,170	3,790	-69%
Otolaryngology	1,900	2,723	-30%	1,108	2,368	-53%	2,370	1,734	37%	411	282	46%	2,371	4,103	-42%
General Surgery	5,799	5,078	14%	2,284	2,579	-11%	4,898	2,801	75%	754	1,437	-48%	5,618	7,082	-21%
Neurosurgery	63	650	-90%	638	1,591	-60%	216	324	-33%	224	216	4%	1,788	2,151	-17%
Orthopaedic Surgery	3,675	3,627	1%	1,799	1,960	-8%	2,098	1,291	63%	622	676	-8%	6,429	7,344	-12%
Cardiovascular Surgery	1,127	798	41%	734	220	234%	44	67	-35%	—	215	—	659	867	-24%
Urology	2,135	2,351	-9%	711	920	-23%	1,661	1,377	21%	317	185	71%	2,703	3,260	-17%
Internal Medicine	1,078	1,274	-15%	743	806	-8%	160	375	-57%	153	221	-31%	2,511	2,726	-8%
Radiation Oncology	214	461	-54%	146	79	85%	30	7	334%	34	20	71%	472	214	120%
Medical Oncology	128	104	23%	188	57	229%	13	45	-72%	64	—	—	545	189	188%
Residual	11,186	13,541	-17%	5,864	7,913	-26%	8,970	5,730	57%	1,532	2,651	-42%	13,291	21,367	-38%
Total	31,237	35,385	-12%	16,098	21,121	-24%	22,955	15,958	44%	4,825	7,192	-33%	42,021	58,283	-28%

	Quebec			New Brunswick			Nova Scotia			Prince Edward Island			Newfoundland		
	1999	1998	% chg	1999	1998	% chg	1999	1998	% chg	1999	1998	% chg	1999	1998	% chg
	Plastic Surgery	403	871	-54%	141	128	10%	266	218	22%	48	—	—	289	46
Gynaecology	2,656	3,828	-31%	842	728	16%	452	795	-43%	47	48	-3%	239	263	-9%
Ophthalmology	1,738	6,943	-75%	44	366	-88%	90	534	-83%	4	21	-79%	33	64	-48%
Otolaryngology	761	2,937	-74%	468	491	-5%	855	922	-7%	—	—	—	930	1,192	-22%
General Surgery	5,068	10,845	-53%	1,088	736	48%	617	748	-18%	282	69	309%	525	393	34%
Neurosurgery	1,402	1,381	2%	200	336	-41%	139	160	-13%	—	—	—	19	121	-84%
Orthopaedic Surgery	3,680	5,295	-31%	421	313	34%	482	465	4%	71	135	-47%	89	122	-27%
Cardiovascular Surgery	609	296	106%	97	78	25%	170	—	—	—	—	—	73	237	-69%
Urology	1,729	2,428	-29%	407	528	-23%	374	254	47%	42	18	133%	118	99	19%
Internal Medicine	1,593	2,003	-20%	177	429	-59%	321	354	-9%	7	57	-88%	206	179	15%
Radiation Oncology	455	138	230%	43	18	142%	37	75	-50%	—	—	—	39	91	-57%
Medical Oncology	280	191	47%	69	—	—	67	0	—	3	1	200%	—	—	—
Residual	11,986	19,754	-39%	1,893	2,158	-12%	1,885	2,750	-31%	256	329	-22%	1,688	1,074	57%
Total	32,360	56,910	-43%	5,889	6,308	-7%	5,755	7,274	-21%	760	679	12%	4,250	3,880	10%

Table 29b: Comparison of Estimated Number of Patients Waiting for Treatment after Appointment with Specialist, by Speciality, 1998 and 1999

Table 30: Frequency Distribution of Waiting Times (Specialist to Treatment) by Province, 1999—Proportion of Median Waiting Times that Fall within Particular Ranges

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
0–3.99 weeks	15.7%	18.9%	22.6%	31.9%	25.7%	29.0%	22.9%	28.8%	16.5%	28.8%
4–7.99 weeks	22.1%	24.2%	19.6%	24.7%	34.7%	29.3%	24.4%	30.3%	43.5%	35.4%
8–11.99 weeks	16.2%	18.6%	6.4%	15.0%	15.6%	14.7%	16.5%	14.8%	9.4%	17.0%
12–23.99 weeks	27.8%	29.2%	10.8%	18.3%	17.3%	16.9%	21.4%	15.3%	10.6%	9.6%
24–51.99 weeks	13.4%	7.2%	15.8%	9.4%	5.6%	7.5%	12.0%	8.1%	18.8%	6.6%
1 year or more	4.7%	2.0%	24.8%	0.8%	1.2%	2.5%	3.0%	2.8%	1.2%	2.6%

Note: Columns do not necessarily sum to 100 due to rounding.

Table 31: Median Total Expected Waiting Time from Referral by GP to Treatment, by Specialty, 1999 (in Weeks)

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF	CAN
Plastic Surgery	29.4	26.6	32.7	41.5	14.1	8.9	30.7	47.5	34.5	104.8	18.7
Gynaecology	15.1	17.9	40.6	8.2	12.8	12.2	14.5	13.8	13.0	12.8	13.8
Ophthalmology	10.6	12.7	24.5	10.1	19.8	26.5	27.0	15.9	26.0	30.9	19.3
Otolaryngology	17.4	26.7	54.6	19.7	14.0	8.9	11.5	16.6	—	27.2	13.3
General Surgery	11.8	9.2	32.6	5.6	6.5	7.7	8.0	5.5	16.6	12.4	7.5
Neurosurgery	19.0	35.7	19.9	29.8	16.7	13.5	26.7	18.2	—	7.4	18.2
Orthopaedic Surgery	34.4	32.6	61.6	22.0	21.4	25.5	23.9	23.9	23.0	15.9	24.6
Cardiovascular Surgery (Elective)	12.2	16.0	9.8	—	11.1	13.4	36.9	9.8	—	58.0	14.5
Urology	15.4	13.3	40.4	6.5	9.1	8.4	14.0	8.6	22.5	11.8	9.5
Internal Medicine	11.0	10.3	11.2	7.7	7.8	9.1	5.5	10.0	10.5	9.2	8.8
Radiation Oncology	10.9	10.0	9.0	6.0	7.9 ¹	11.5	5.6	3.6	—	9.3	9.1
Medical Oncology	4.0	10.2	4.0	10.5	4.8 ²	3.1	5.2	7.5	5.0	—	4.5
Weighted Median	15.8	16.3	34.5	11.2	11.8	12.4	15.8	12.8	18.8	19.5	14.0

¹Cancer Care Ontario data show a median wait for radiotherapy of 6.1 weeks in December 1999.
²Cancer Care Ontario data show a median wait for chemotherapy of 4.9 weeks in December 1999.

Table 32: Plastic Surgery (1999)—Median Reasonable Patient Wait for Treatment after Appointment with Specialist (in Weeks)

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Mammoplasty	12.0	12.0	13.0	14.0	8.0	4.8	8.0	12.0	12.0	—
Neurolysis	5.0	6.0	8.0	6.0	4.0	4.0	4.0	6.0	12.0	—
Blepharoplasty	6.0	6.0	7.0	11.0	4.0	6.0	8.0	6.0	12.0	—
Rhinoplasty	8.0	12.0	14.5	8.0	4.0	6.0	10.0	14.0	12.0	—
Scar Revision	7.5	12.0	7.0	13.0	6.0	6.0	10.0	16.0	12.0	—
Hand Surgery	6.0	7.5	12.0	6.0	4.0	4.0	7.0	4.0	12.0	—
Craniofacial Procedures	6.0	16.0	4.0	8.0	4.0	6.0	4.0	12.0	12.0	—
Skin Cancer and Other Tumors	2.0	3.0	2.0	3.5	3.0	2.0	3.0	4.0	12.0	—
Weighted Median ¹	8.1	10.3	9.9	10.7	5.6	5.0	8.1	12.4	12.0	—

¹Weighted median does not include craniofacial procedures or skin cancer and other tumors.

Table 33: Gynaecology (1999)—Median Reasonable Patient Wait for Treatment after Appointment with Specialist (in Weeks)

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Dilation and Curettage	2.0	3.0	4.0	3.0	3.0	3.0	6.0	3.5	3.5	2.0
Tubal Ligation	5.8	6.5	12.0	5.0	5.0	6.0	9.0	8.0	5.0	4.5
Hysterectomy (Vaginal/Abdominal)	5.0	6.0	12.0	8.0	5.0	4.5	9.0	7.0	5.0	5.0
Vaginal Repair	6.0	6.5	12.0	8.0	5.5	7.0	9.0	7.0	6.0	5.0
Tuboplasty	6.0	6.0	13.0	6.0	6.0	8.0	10.0	6.0	6.0	4.0
Laparoscopic Procedures	4.0	5.0	9.0	4.0	4.0	4.0	8.0	8.0	4.0	3.0
Hysteroscopic Procedures	4.0	4.0	10.0	4.0	4.0	4.0	8.0	4.5	4.0	3.0
Weighted Median ¹	5.0	5.8	11.6	6.7	5.0	4.8	8.9	7.0	5.0	4.6

¹Weighted median does not include hysteroscopic procedures.

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Cataract Removal	6.0	6.0	12.0	9.0	8.0	8.0	8.0	6.0	12.0	9.0
Cornea Transplant	6.0	6.0	18.0	16.0	6.5	11.0	8.0	8.5	—	8.0
Cornea—Pterygium	4.0	7.0	9.5	4.8	8.0	8.0	7.5	4.0	12.0	7.0
Iris, Ciliary Body, Sclera, Anterior Chamber	4.0	4.0	7.0	12.0	4.0	5.8	6.0	—	—	4.0
Retina, Choroid, Vitreous	1.5	2.0	1.0	—	2.0	2.5	4.0	1.8	—	—
Lacrimal Duct	5.0	8.0	12.0	6.0	6.5	9.0	8.0	6.0	—	5.0
Strabismus	4.0	6.0	12.0	12.0	7.0	10.0	8.0	6.0	12.0	6.0
Operations on Eyelids	4.0	6.0	12.0	4.8	6.0	8.0	8.0	4.0	12.0	6.0
Glaucoma	2.8	4.0	7.5	4.0	3.8	4.0	4.0	1.5	12.0	3.5
Weighted Median ¹	2.5	3.0	7.0	7.1	3.7	6.5	6.8	2.5	12.0	6.8

¹Weighted median does not include cornea transplant or operations for glaucoma.

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Myringotomy	3.8	4.0	4.0	5.0	4.0	3.5	4.5	3.5	—	2.5
Tympanoplasty	8.0	8.0	12.0	5.0	6.0	5.0	6.0	8.0	—	4.0
Thyroid, Parathyroid, and Other Endocrine Glands	4.0	4.0	12.0	8.0	4.0	4.0	5.0	6.0	—	3.0
Tonsillectomy and/or Adenoidectomy	6.0	7.0	12.0	6.0	6.0	4.0	6.5	7.0	—	3.0
Rhinoplasty and/or Septal Surgery	8.0	8.0	12.0	6.0	7.0	8.0	10.0	7.0	—	3.0
Operations on Nasal Sinuses	8.0	6.0	12.0	6.0	4.3	4.0	10.0	6.5	—	2.0
Weighted Median	6.1	6.0	11.9	6.4	5.3	4.6	6.6	6.8	—	3.0

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Hernia/Hydrocele	4.5	4.0	11.0	5.0	4.0	4.0	6.0	4.0	8.0	4.0
Cholecystectomy	4.0	4.0	8.0	5.0	4.0	4.0	6.0	3.0	8.0	3.3
Colonoscopy	2.0	2.0	3.0	3.0	3.0	3.0	4.0	2.5	1.5	2.5
Intestinal Operations	2.3	2.8	3.0	2.0	2.0	2.3	3.5	1.8	2.5	2.0
Haemorrhoidectomy	6.0	6.0	12.0	7.0	4.0	5.0	7.0	3.5	8.0	4.0
Breast Biopsy	2.0	1.0	2.0	1.0	2.0	2.0	2.0	1.8	2.0	1.3
Mastectomy	2.0	1.5	2.0	2.0	2.0	2.0	2.0	1.5	2.0	1.0
Bronchus and Lung	1.5	2.0	2.0	1.5	2.0	2.0	6.0	1.0	3.0	2.0
Aneurysm Surgery	2.0	3.0	2.0	3.0	4.0	2.0	6.0	3.3	—	2.0
Varicose Veins	10.0	6.0	12.5	8.0	6.0	8.0	8.5	5.0	12.5	4.5
Weighted Median ¹	3.2	3.2	6.3	3.7	2.9	3.2	4.7	2.5	5.2	2.8

¹Weighted median does not include aneurysm surgery.

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Peripheral Nerve	4.0	5.0	2.5	3.5	4.0	3.3	9.0	4.0	—	3.0
Disc Surgery/Laminectomy	4.0	6.0	3.8	4.0	3.8	3.0	8.0	4.0	—	—
Elective Cranial Bone Flap	4.0	4.0	3.5	4.0	3.8	2.3	4.0	2.0	—	1.5
Aneurysm Surgery	3.0	4.0	3.5	0.0	4.0	3.0	6.0	4.0	—	1.5
Carotid Endarterectomy	2.8	2.3	1.0	0.0	1.8	2.0	4.0	2.0	—	—
Weighted Median ¹	4.0	5.0	3.6	4.0	3.8	2.8	6.5	3.2	—	1.7

¹Weighted median does not include aneurysm surgery or carotid endarterectomy.

Table 38: Orthopaedic Surgery (1999)—Median Reasonable Patient Wait for Treatment after Appointment with Specialist (in Weeks)

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Meniscectomy/Arthroscopy	5.0	4.0	6.0	8.0	4.0	4.0	5.0	4.0	7.0	3.3
Removal of Pins	6.0	8.0	6.0	9.0	6.0	8.0	12.0	8.0	10.0	6.0
Arthroplasty (Hip, Knee, etc.)	10.0	10.0	12.0	14.0	8.0	11.5	8.0	7.0	14.0	6.0
Arthroplasty (Interphalageal)	6.0	8.0	9.0	12.0	6.0	8.0	8.0	6.5	6.0	6.0
Hallux Valgus/Hammer Toe	6.0	8.0	12.0	8.0	6.0	10.0	9.0	8.0	11.0	8.0
Digit Neuroma	6.0	5.0	6.0	12.0	4.0	7.0	9.0	7.0	6.0	6.0
Rotator Cuff Repair	6.0	5.0	6.0	16.0	4.0	6.0	6.0	6.0	6.0	5.0
Ostectomy (All Types)	6.0	8.0	9.0	10.0	6.0	8.0	8.0	6.0	6.0	8.0
Routine Spinal Instability	7.0	8.0	16.5	18.0	6.0	8.5	10.0	14.0	12.0	11.0
Weighted Median ¹	8.3	8.8	10.3	12.9	7.1	9.5	7.9	6.8	11.8	6.2

¹Weighted median does not include removal of pins or routine spinal instability.

Table 39: Cardiovascular Surgery (1999)—Median Reasonable Patient Wait for Treatment after Appointment with Specialist (in Weeks)

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF	
EMERGENT	Coronary Artery Bypass	0.5	1.0	0.0	—	0.0	0.1	0.0	0.0	—	0.0
	Valves & Septa of the Heart	0.5	1.0	0.0	—	0.0	0.2	0.0	0.0	—	0.0
	Aneurysm Surgery	0.0	—	0.0	—	0.0	0.0	0.0	0.0	—	1.0
	Carotid Endarterectomy	—	—	0.0	—	0.5	0.0	0.0	—	—	1.0
	Pacemaker Operations	1.0	0.8	0.0	—	1.0	0.1	0.0	0.0	—	—
URGENT	Coronary Artery Bypass	2.5	0.0	1.0	—	1.0	0.3	2.0	4.0	—	1.0
	Valves & Septa of the Heart	2.5	2.0	1.0	—	1.0	0.5	—	4.0	—	4.0
	Aneurysm Surgery	2.5	—	1.0	—	1.0	0.0	0.0	4.0	—	2.0
	Carotid Endarterectomy	1.0	—	1.0	—	1.0	0.0	0.0	—	—	1.0
	Pacemaker Operations	1.8	2.0	1.0	—	1.3	0.1	0.0	1.0	—	—
ELECTIVE	Coronary Artery Bypass	5.0	6.0	6.0	—	5.5	4.0	8.0	12.0	—	12.0
	Valves & Septa of the Heart	5.0	9.0	6.0	—	5.5	4.0	12.0	12.0	—	12.0
	Aneurysm Surgery	5.0	—	6.0	—	7.0	4.0	12.0	12.0	—	4.0
	Carotid Endarterectomy	4.0	—	6.0	—	2.0	4.0	12.0	—	—	4.0
	Pacemaker Operations	4.0	12.0	6.0	—	2.8	3.5	2.0	3.0	—	—

Table 40: Urology (1999)—Median Reasonable Patient Wait for Treatment after Appointment with Specialist (in Weeks)

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Non-radical Prostatectomy	4.0	4.0	16.0	3.0	3.5	4.0	6.0	5.0	6.0	2.5
Radical Prostatectomy	2.0	3.5	3.0	3.5	4.0	4.0	3.0	2.0	3.0	2.5
Transurethral Resection—Bladder	2.0	2.5	2.0	2.5	2.0	2.0	3.0	2.0	3.0	2.5
Radical Cystectomy	2.0	3.0	3.0	2.5	3.0	2.0	3.0	2.0	4.0	3.0
Cystoscopy	3.0	2.3	1.0	1.8	2.0	2.0	4.0	4.0	—	3.0
Hernia/Hydrocele	5.0	6.5	14.0	6.0	4.0	5.0	6.0	6.0	10.0	4.0
Bladder Fulguration	2.0	2.0	3.0	3.0	2.0	2.0	3.0	2.0	—	2.0
Ureteral Reimplantation for Reflux	4.0	6.0	16.0	8.0	5.0	3.3	8.0	—	8.0	6.0
Weighted Median ¹	3.6	3.8	9.4	3.5	2.9	3.3	4.9	4.3	6.0	2.8

¹Weighted median does not include radical prostatectomy, radical cystectomy, or ureteral reimplantation for reflux.

Table 41: Internal Medicine (1999)—Median Reasonable Patient Wait for Treatment after Appointment with Specialist (in Weeks)

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Colonoscopy	2.0	2.0	2.0	2.0	2.0	3.0	2.0	3.0	—	2.0
Angiography/Angioplasty	2.3	2.0	2.0	1.3	2.0	3.0	2.1	3.0	—	3.0
Bronchoscopy	1.8	2.0	1.5	2.0	2.0	2.0	2.0	2.0	—	2.3
Gastroscopy	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	4.0	2.0
Weighted Median	2.1	2.0	2.0	1.7	2.0	2.5	2.0	3.0	4.0	2.4

Table 42: Radiation Oncology (1999)—Median Reasonable Patient Wait for Treatment after Appointment with Specialist (in Weeks)

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Cancer of the Larynx	4.0	2.3	2.0	—	2.0	2.0	3.0	3.5	—	3.0
Cancer of the Cervix	4.0	2.3	2.5	—	2.0	2.0	4.0	3.0	—	4.0
Lung Cancer	4.0	2.3	3.0	—	2.0	2.0	4.0	3.5	—	6.0
Prostate Cancer	5.5	3.3	4.0	—	3.0	4.0	8.0	4.0	—	8.5
Breast Cancer	4.0	4.0	4.0	2.0	2.5	4.0	4.0	3.5	—	6.0
Early Side Effects from Treatment	1.3	1.0	0.1	0.0	1.0	0.5	2.0	0.5	—	1.0
Late Side Effects from Treatment	2.5	1.5	2.0	0.0	1.3	1.0	2.0	0.5	—	1.0
Weighted Median ¹	4.5	3.2	3.6	2.0	2.5	3.1	5.3	3.7	—	6.7

¹Weighted median does not include early or late side effects from treatment.

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF
Cancer of the Larynx	2.0	2.5	—	3.0	2.0	2.0	4.0	4.0	3.0	—
Cancer of the Cervix	2.0	2.5	—	—	2.0	2.3	4.0	4.0	3.0	—
Lung Cancer	2.0	2.0	1.5	2.5	2.0	2.0	4.0	1.0	3.0	—
Breast Cancer	2.0	2.5	1.5	3.0	2.0	2.0	4.0	4.0	3.0	—
Side Effects from Treatment	0.6	0.5	—	0.1	0.0	0.0	0.0	0.0	0.1	—
Weighted Median ¹	2.0	2.3	1.5	2.7	2.0	2.0	4.0	2.5	3.0	—

¹Weighted median does not include side effects from treatment.

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF	CAN
Plastic Surgery	8.1	10.3	9.9	10.7	5.6	5.0	8.1	12.4	12.0	—	6.5
Gynaecology	5.0	5.8	11.6	6.7	5.0	4.8	8.9	7.0	5.0	4.6	5.1
Ophthalmology	2.5	3.0	7.0	7.1	3.7	6.5	6.8	2.5	12.0	6.8	4.3
Otolaryngology	6.1	6.0	11.9	6.4	5.3	4.6	6.6	6.8	—	3.0	5.6
General Surgery	3.2	3.2	6.3	3.7	2.9	3.2	4.7	2.5	5.2	2.8	3.1
Neurosurgery	4.0	5.0	3.6	4.0	3.8	2.8	6.5	3.2	—	1.7	4.0
Orthopaedic Surgery	8.3	8.8	10.3	12.9	7.1	9.5	7.9	6.8	11.8	6.2	7.8
Cardiovascular Surgery (Urgent)	3.2	0.8	1.3	—	1.3	0.3	2.0	4.3	—	1.2	1.0
Cardiovascular Surgery (Elective)	6.5	9.3	7.8	—	6.2	4.5	9.2	13.0	—	12.0	5.5
Urology	3.6	3.8	9.4	3.5	2.9	3.3	4.9	4.3	6.0	2.8	3.4
Internal Medicine	2.1	2.0	2.0	1.7	2.0	2.5	2.0	3.0	4.0	2.4	2.0
Radiation Oncology	4.5	3.2	3.6	2.0	2.5	3.1	5.3	3.7	—	6.7	3.2
Medical Oncology	2.0	2.3	1.5	2.7	2.0	2.0	4.0	2.5	3.0	—	2.0
Weighted Median	4.2	4.7	7.5	4.5	3.8	3.9	5.6	4.7	5.9	3.9	4.1

Table 45: Comparison between the Median Actual Number of Weeks Waited and the Median Reasonable Number of Weeks to Wait for Treatment after Appointment with Specialist, 1999

	British Columbia			Alberta			Saskatchewan			Manitoba			Ontario		
	A	R	D	A	R	D	A	R	D	A	R	D	A	R	D
Plastic Surgery	17.4	8.1	114%	14.6	10.3	41%	26.7	9.9	169%	23.5	10.7	119%	8.1	5.6	44%
Gynaecology	12.1	5.0	143%	9.9	5.8	72%	37.6	11.6	224%	5.9	6.7	-12%	6.8	5.0	37%
Ophthalmology	5.6	2.5	119%	3.7	3.0	26%	12.5	7.0	79%	4.6	7.1	-36%	7.8	3.7	111%
Otolaryngology	14.4	6.1	138%	12.7	6.0	114%	51.6	11.9	332%	11.7	6.4	83%	8.0	5.3	51%
General Surgery	7.8	3.2	141%	5.7	3.2	81%	29.1	6.3	364%	3.6	3.7	-3%	3.5	2.9	18%
Neurosurgery	10.0	4.0	150%	9.7	5.0	93%	7.9	3.6	117%	13.8	4.0	248%	6.7	3.8	78%
Orthopaedic Surgery	22.4	8.3	170%	20.6	8.8	134%	55.6	10.3	442%	15.7	12.9	22%	13.4	7.1	90%
Cardiovascular Surgery (Urgent)	5.5	3.2	74%	0.7	0.8	-12%	1.0	1.3	-23%	—	—	—	1.3	1.3	-1%
Cardiovascular Surgery (Elective)	8.2	6.5	26%	12.0	9.3	30%	7.3	7.8	-6%	—	—	—	7.6	6.2	23%
Urology	10.9	3.6	201%	5.3	3.8	40%	30.4	9.4	222%	4.5	3.5	30%	4.6	2.9	56%
Internal Medicine	7.0	2.1	228%	6.3	2.0	217%	5.2	2.0	162%	4.7	1.7	174%	4.8	2.0	140%
Radiation Oncology	6.9	4.5	53%	6.0	3.2	90%	5.5	3.6	51%	4.0	2.0	100%	4.9	2.5	98%
Medical Oncology	2.0	2.0	0%	5.2	2.3	130%	1.0	1.5	-33%	5.7	2.0	186%	2.3	2.0	13%
Weighted Median	10.4	4.2	149%	8.9	4.7	89%	28.9	7.5	284%	7.2	4.5	59%	6.0	3.8	58%

Note: A = Median Actual Wait; R = Median Clinically Reasonable Wait; D = Percentage Difference. Percentage differences are calculated from exact weighted medians, which have been rounded for inclusion in the table.

Table 45: Comparison between the Median Actual Number of Weeks Waited and the Median Reasonable Number of Weeks to Wait for Treatment after Appointment with Specialist, 1999

	Quebec			New Brunswick			Nova Scotia			Prince Edward Island			Newfoundland		
	A	R	D	A	R	D	A	R	D	A	R	D	A	R	D
Plastic Surgery	5.9	5.0	18%	11.7	8.1	44%	31.5	12.4	155%	26.5	12.0	121%	92.8	—	—
Gynaecology	6.2	4.8	30%	10.0	8.9	12%	7.8	7.0	11%	6.0	5.0	21%	6.8	4.6	47%
Ophthalmology	14.5	6.5	124%	11.0	6.8	61%	3.9	2.5	59%	16.0	12.0	33%	6.9	6.8	2%
Otolaryngology	5.4	4.6	16%	9.0	6.6	36%	11.1	6.8	64%	—	—	—	21.2	3.0	599%
General Surgery	4.7	3.2	48%	3.0	4.7	-35%	2.5	2.5	2%	14.6	5.2	180%	5.9	2.8	107%
Neurosurgery	5.5	2.8	94%	12.7	6.5	94%	8.2	3.2	158%	—	—	—	2.4	1.7	36%
Orthopaedic Surgery	18.5	9.5	95%	11.9	7.9	50%	15.9	6.8	135%	18.7	11.8	58%	5.9	6.2	-5%
Cardiovascular Surgery (Urgent)	0.2	0.3	-48%	3.1	2.0	57%	3.3	4.3	-24%	—	—	—	4.2	1.2	263%
Cardiovascular Surgery (Elective)	11.4	4.5	151%	27.9	9.2	204%	9.8	13.0	-24%	—	—	—	52.0	12.0	333%
Urology	4.4	3.3	32%	7.5	4.9	54%	5.6	4.3	30%	8.5	6.0	41%	4.8	2.8	74%
Internal Medicine	4.1	2.5	67%	3.0	2.0	48%	5.0	3.0	69%	3.0	4.0	-25%	5.7	2.4	137%
Radiation Oncology	9.5	3.1	209%	4.6	5.3	-13%	3.6	3.7	-2%	—	—	—	7.3	6.7	10%
Medical Oncology	1.1	2.0	-44%	2.2	4.0	-45%	3.5	2.5	41%	2.0	3.0	-33%	—	—	—
Weighted Median	7.1	3.9	84%	8.2	5.6	46%	6.8	4.7	44%	12.6	5.9	112%	12.0	3.9	206%

Note: A = Median Actual Wait; R = Median Clinically Reasonable Wait; D = Percentage Difference. Percentage differences are calculated from exact weighted medians, which have been rounded for inclusion in the table.

Appendix 1: The Fraser Institute National Waiting List Survey

General Surgery

Please circle the province in which your office is located:

AB BC MB NB NF NS NT NU ON PE QC SK YT

- From today, how long (in weeks) would a new patient have to wait for a routine office consultation with you?
_____ week(s)
- Do you restrict the number of patients waiting to see you in any manner? (i.e. Do you accept referrals only at certain times of the year?)
 Yes No
- Over the past 12 months, what percentage of the surgical procedures you performed were done on a day surgery basis?
_____ %
- From today, how long (in weeks) would a new patient have to wait for the following types of elective surgery or diagnostic procedures? What would you consider to be a clinically reasonable waiting time for these types of surgery and procedures?

Surgery or Procedure	Number of Weeks to Wait	Reasonable Number of Weeks to Wait
Hernia repair (all types)/hydrocele		
Cholecystectomy		
Colonoscopy (diagnostic)		
Incision, excision, anastomosis of intestine and other operations on intestine		
Haemorrhoidectomy/other anal surgery		
Breast biopsy		
Mastectomy/segmental resection		
Operations on bronchus and lung		
Incidentally discovered and unruptured aneurysms		
Varicose vein surgery		

5. Has the length of your waiting lists changed since last year at this time?

- Increased Decreased Remained the Same

6. If the length of your waiting lists has changed, what are the major reasons for the change? (Check all which may be applicable.)

- _____ Availability of O/R nurses
 _____ Availability of other technical staff
 _____ Availability of beds
 _____ Availability of O/R time
 _____ Change in patient load
 _____ Availability of ancillary investigations or consultations (i.e. MRI, CT scans)
 _____ Other

7. What percentage of your patients currently waiting for surgery are on a waiting list primarily because **they** requested a delay or postponement?

_____ %

8. What percentage of your patients currently waiting for surgery do you think would agree to having their surgery within the week if an opening arose in O/R?

_____ %

9. To the best of your knowledge, what percentage of your patients that are listed on hospital waiting lists might also be listed by other physicians for the same procedure?

_____ %

10. Do you use the following types of diagnostic tests? If so, how long (in weeks) would a new patient have to wait for these tests?

Do you use this diagnostic test?	Yes	No	Infrequently	Number of weeks patients wait
CT Scan				
MRI				
Ultrasound				

11. Approximately what percentage of your patients **inquired** in the past 12 months about the availability of medical services:

Outside of the province? _____ % Outside of Canada? _____ %

12. Approximately what percentage of your patients **received** non-emergency medical treatment in the past 12 months:

Outside of the province? _____ % Outside of Canada? _____ %

Thank you very much for your cooperation.

Appendix 2: Glossary of Terms

Aneurysm Surgery: a surgical procedure to correct a localized abnormal dilatation of a blood vessel, usually an artery, due to a congenital defect or a weakness in the wall of the vessel.

Angiography/Angioplasty: **angiography** is the diagnostic or therapeutic radiography of the heart and blood vessels using a radiopaque (impenetrable to x-rays or other forms of radiation) contrast medium (types include magnetic resonance imaging, interventional radiology, and computed tomography), and an **angioplasty** is the alteration of a blood vessel, either surgically or by dilating the vessel using a balloon inside the lumen (the space within an artery or vein).

Arthroplasty: plastic surgery to reshape or reconstruct a diseased joint (“interphalangeal” refers to a joint between two phalanges, i.e., fingers or toes).

Bladder Fulguration: destruction of bladder tissue by means of high-frequency electric sparks.

Blepharoplasty: plastic surgery on the eyelid.

Bronchoscopy: examination of the bronchi through a bronchoscope (an endoscope designed to pass through the trachea for visual inspection of the tracheobronchial tree).

Bronchus: the bronchus, or windpipe, is one of the two large branches of the trachea.

Carotid Endarterectomy: a surgical technique for removing intra-arterial obstructions of the lower cervical portion of the internal carotid artery (one of two arteries that comprise the principal blood supply to the head and neck).

Cataract Removal: removal of a cataract (i.e., opacity of the lens of the eye, its capsule, or both).

Cholecystectomy: excision of the gallbladder by abdominal incision or laparoscopy.

Colonoscopy: examination of the upper portion of the rectum with an elongated speculum or a colonoscope (an instrument for examining the colon).

Cornea—Pterygium: triangular thickening of the bulbar conjunctiva extending from the inner canthus (eye slit) to the border of the cornea with the apex toward the pupil.

Cornea Transplant: transplant of the cornea (transparent anterior portion of the fibrous outer layer of the eyeball composing about one-sixth of its surface).

Craniofacial Procedures: procedures concerning the head and the face.

Cystectomy: removal of a cyst; excision of the cystic duct and the gallbladder, or just the cystic duct; excision of the urinary bladder or a part of it.

Cystoscopy: examination of the bladder with a cystoscope (an instrument for interior examination of the bladder and ureter).

Digit Neuroma: a neuroma (i.e., a tumour composed of nerve cells) affecting a digit (finger or toe).

Dilation and Curettage: a surgical procedure that expands the cervical canal of the uterus (dilation) so that the surface lining of the uterine wall can be scraped (curettage).

Disk Surgery/Laminectomy: a laminectomy is the excision of a vertebral posterior arch, usually to remove a lesion or herniated disc.

Gastroscopy: examination of the stomach and abdominal cavity using a gastroscope (an endoscope for inspecting the stomach’s interior).

Glaucoma: a group of eye diseases characterized by increased intraocular pressure, resulting in atrophy of the optic nerve and possibly leading to blindness.

Hallux Valgus: displacement of the big toe toward the other toes.

Haemorrhoidectomy: the removal of haemorrhoids by one of several techniques including surgery, cryotherapy, infrared photocoagulation, laser surgery, or liga-

tion by use of rubber bands applied to the base of the haemorrhoid.

Hernia/Hydrocele: a **hernia** is a protrusion or projection of an organ or part of an organ through the wall of the cavity that normally contains it, and a **hydrocele** is the accumulation of a serous fluid in a saclike cavity.

Hysterectomy: surgical removal of the uterus through the abdominal wall or vagina.

Hysteroscopic Procedures: procedures involving inspection of the uterus by the use of a special endoscope called a hysteroscope (an instrument for examining the uterine cavity).

Iris/Ciliary Body/Sclera/Anterior Chamber: **iris** (the coloured contractile membrane suspended between the lens and the cornea in the aqueous humour of the eye, separating the anterior and posterior chambers of the eyeball and perforated in the centre by the pupil); **ciliary muscle** (the smooth muscle forming a part of the ciliary body of the eye: contraction pulls the choroid forward, lessening tension on the fibres of the zonula (suspensory ligament) and allowing the lens, which is elastic, to become more spherical: accommodation for near vision is accomplished by this process); and, **sclera** (the outer layer of the eyeball made of fibrous connective tissue: at the front of the eye, it is visible as the white of the eye and ends at the cornea, which is transparent).

Lacrimal Duct: tear duct.

Laparoscopic Procedures: procedures involving abdominal exploration using a laparoscope (an endoscope designed to permit visual examination of the abdominal cavity).

Mammoplasty: plastic surgery of the breast.

Mastectomy: excision of the breast.

Meniscectomy/Arthroscopy: a **meniscectomy** is the removal of meniscus cartilage of the knee, and **arthroscopy** is the direct visualization of a joint by means of an arthroscope (an endoscope for examining the interior of a joint).

Myringotomy: incision of the tympanic membrane (of the ear).

Neurolysis: the stretching of a nerve to relieve pain; the loosening of adhesions surrounding a nerve; the disintegration or destruction of nerve tissue.

Ostectomy: surgical excision of a bone or a portion of one.

Peripheral Nervous System: the portion of the nervous system outside the central nervous system.

Prostatectomy: excision of part or all of the prostate gland (radical is the complete removal, while non-radical is a partial removal).

Retina/Choroid/Vitreous: **retina** (the innermost layer of the eye, which receives images transmitted through the lens and contains the receptors for vision, the rods and cones); **choroid** (the dark blue vascular layer of the eye between the sclera and the retina, extending from the ora serrata to the optic nerve: it consists of blood vessels united by connective tissue containing pigmented cells and contains five layers); and, **vitreous body** (a transparent jelly-like mass composed of collagen fibrils and a gel (vitreous humour): it fills the cavity of the eyeball, behind the lens and in front of the retina).

Rhinoplasty and/or Septal Surgery: **rhinoplasty** is plastic surgery of the nose, and **septal surgery** is a surgical procedure on the nasal septum, i.e., the wall dividing the two nasal cavities.

Strabismus: a disorder of the eye in which optic axes cannot be directed to the same object: the squinting eye always deviates to the same extent when the eyes are carried in different directions.

Thyroid and Other Endocrine Glands: the **thyroid** is an endocrine gland in the neck, anterior to and partially surrounded by the thyroid cartilage and upper rings of the trachea, and **endocrine glands** are ductless glands that produces an internal secretion discharged into the blood or lymph and circulated to all parts of the body (hormones, the active principles of the glands, affect tissues more or less remote from their place of origin).

Tonsillectomy and/or Adenoidectomy: a **tonsillectomy** is the surgical removal of the tonsils and an **adenoidectomy** is the excision of the adenoids.

Tubal ligation: surgery to tie the fallopian tubes (through which ova and spermatozoa travel).

Tuboplasty: plastic repair of a fallopian tube or tubes in an attempt to restore patency so that fertilization of the ovum may occur.

Tympanoplasty: any one of several surgical procedures designed either to cure a chronic inflammatory process in the middle ear or to restore function to the sound-transmitting mechanism of the middle ear.

Varicose vein: an enlarged, twisted superficial vein.

Source: Thomas (1997).

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