

# **Waiting for Medical Services in Ontario: Clarifying the Issues In a Period of Health Reform**

**A Discussion Paper for the Atkinson Charitable Foundation**

**S.E.D. Shortt, M.D., Ph.D  
Queen's Health Policy  
Queen's University  
Kingston, Ontario**

**February 2000**

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## **Executive Summary**

The reform and restructuring which has characterized health care delivery in Ontario for almost a decade appears to coincide, understandably, with increased public anxiety about access to services. One specific issue concerns waiting lists. Polls suggest that both patients and providers across Canada believe waiting times for many services have increased substantially. However, the provincial studies published to date do not support this perception. This incongruity suggests that the health system needs to develop a basic vocabulary and conceptual tool box by which to discuss and communicate data on waiting issues.

This discussion paper is designed to begin that process, and to survey briefly activity in service areas of particular concern. Specifically, it reviews the literature on how waiting times and lists are defined and measured, discusses theories on the causes and effects of waiting for health care, summarizes strategies for managing waiting time issues, and reviews briefly the Ontario experience with waiting for cardiac surgery, joint replacement and cancer care.

The paper suggests that, though most patients in Ontario likely receive urgent medical care in a timely fashion, the situation for elective care is less certain. Specific findings include:

- While there is substantial confusion about waiting time terminology, measurement, and significance, it is clear that waiting lists are a poor reflection of patient need.
- Though waiting lists are caused by many factors, they appear endemic to state-funded systems and may, in fact, attest to the presence of universal access to care.
- Waiting adversely affects a patient's quality of life, but the impact on morbidity or mortality is far more difficult to establish.
- The allocation of additional resources, without deploying enhanced management strategies, is unlikely to be efficacious in improving waiting list management, while supplementing publicly-funded care with a private payment system will not necessarily reduce waiting in the public system.
- In Ontario, waiting for cardiac surgery has been effectively managed by a province-wide initiative based on objective clinical triage; however, joint replacement and cancer care are two areas which currently require intervention and it is likely in the near future that additional issues, such as access to cataract surgery or magnetic resonance imaging, will demand attention.

The paper recommends that a standardized measurement system for waiting times be encouraged across the province. Areas of service provision currently experiencing waiting problems should be identified by representative consensus panels, and clinical experts should devise evidence-based benchmarks for acceptable waiting times. Incentives should be offered to physicians and hospitals to initiate centralized information systems and to assist providers and institutions to attain these benchmarks. Finally, the public should be informed about waiting times for key services and educated as to reasonable expectations for all services.

## **1. Introduction: Creating a Context**

Throughout the 1990s, a time of significant social program restructuring in Canada, traditional levels of public approval for the health care system declined significantly. In 1991, 61% of respondents to an Angus Reid poll rated the system “excellent” or “very good”, a figure which fell to 52% in 1995, and to 24% in 1999 (1). One component in this escalating disenchantment was the concern that waiting times for medical services were rapidly increasing. According to a poll commissioned by the Canadian Medical Association in 1997, 63% of persons interviewed reported waiting times for surgery had worsened, up from 53% in 1996. The wait for medical tests was viewed as worsening by half of the respondents, a 7% increase over the previous year. Access to specialists was believed to have deteriorated by 49% of those surveyed, in comparison to 40 % in 1996 (2).

The public are by no means alone in their fears: providers, too, believe waiting times are deteriorating. The College of Family Physicians surveyed family doctors across Canada and found more than half believed their patients experienced problems accessing the health services they required, often due to long waits (3). A 1998 survey of a sample of urban and rural family physicians and all specialists by the Alberta Medical Association found 81% of respondents perceived waiting times to have increased since 1994 (4). Perhaps the most widely publicized survey data are found in a report published annually by the Fraser Institute. Though subject to recall bias, hampered by a small response rate, and limited by the use of different respondents yearly, the reports does suggest that the per cent of specialist respondents who believe waiting times are longer has increased since 1995 (5).

The strength of this apparently pervasive conviction that waiting times for medical services are increasing is all the more puzzling given the lack of objective evidence by which to support it. In fact, the only reliable studies to date suggest a quite different conclusion. Using physician billing data, the Nova Scotia Department of Health published a review of waiting associated with the 100 most common elective surgical procedures during the period 1992 to 1996. Excluding coronary artery bypass surgery, the study concluded that overall “waiting times have remained the same or are slightly better than they were several years ago” (6, p. 5). Similarly, the government of British Columbia issued a surgical waiting list report in 1997 which covered approximately 1000 surgeons at 30 of the provinces’s largest hospitals. For the procedures covered in the report’s three year study period, despite a steady increase in the volume of surgery, “the median waiting time for most procedures... changed less than one week” (7, p.7). Finally, the Manitoba Centre for Health Policy and Evaluation, using methodology similar to the Nova Scotia study, released a study of surgical waiting times on behalf of Manitoba Health in 1998 (8). For eight elective procedures, median waits changed very little from 1992/93 to 1996/97, while in the case of electively scheduled cardiac bypass patients, median waits decreased from 1990/91 to 1996/97.

From this brief review, it is clear that there are significant variations between public perceptions of waiting times and the results of provincial studies based on registries or administrative data. What accounts for these discrepancies? Doubtless the public will be influenced by media reports, while some interest groups express concerns about waiting issues as

part of a political agenda centred on the perceived under-funding of the health system. But exacerbating these journalistic or political factors are several more fundamental sources of confusion. There is a the lack of agreement on how waiting issues are defined, on what causes waiting, and on what the precise consequences of waiting are for patients. This conceptual confusion is heightened by the fears engendered by acknowledged resource constraints in the health care sector, such that any discussion tend to be more acrimonious than heuristic. This unfortunate situation suggests that waiting times for medical services deserve closer and more objective scrutiny. The present document is designed to provide broad background information on key issues relating to waiting times and waiting lists in Ontario.

## **2. Waiting Lists and Times: Definitions, Measurement, Significance**

### **2.1 Definitions and Measurement**

A *waiting list* is generally held to be a roster of patients awaiting a particular health service. Such lists refer to elective rather than emergency services, though some lists are used for urgent services as well. In Canada the majority of waiting lists are compiled by individual physicians, though institutions generally compile the waiting lists for diagnostic services. Rarely, for scarce services which may frequently be urgently needed, as in the case of coronary artery bypass surgery, waiting lists may be created at a provincial level.

At present, it appears patients are usually added to waiting lists chronologically and receive their service in the order in which they joined the queue. This basic approach is modified by the clinician who maintains the list to accommodate his/her clinical judgement of urgency. There is no documentation to suggest that evidence-based protocols routinely inform the prioritization by clinicians; however, there is limited evidence to suggest this informal triage achieves results similar to more formalized criteria (9, 10).

Measuring the size of a waiting list by simply counting the number of names is unfortunately misleading. Audits of waiting lists in various specialties and jurisdictions (eg. 11-15) consistently find a significant number of patients for whom the service is no longer required through death, deterioration in health status, movement to another community, receipt of the service elsewhere, resolution of symptoms, or inappropriate initial placement on the list. Moreover, even after auditing a waiting list, a simple tally of names remains relatively meaningless without additional information from which to create a context for the numbers. For example, regional waiting data might be compared to provincial data in what has been called “standardized waiting list ratios” (SWLR). That is, the actual number of people on the waiting list of each region can then be expressed as a percentage of the number of waiting patients expected if all regions had the same waiting pattern (16).

*Waiting time* refers to the length of time required for a patient on the list to receive the desired service. In most jurisdictions the length of time is a function of the manner in which patients enter the list and in which they receive the service. As in the case of waiting lists, measuring waiting time is also a complex task. There is no firm consensus as to what chronological interval should be considered the true waiting time (17). Most studies focus on only one segment of a continuum which includes: the time from onset of symptoms to the

decision to seek medical attention; waiting for a primary care assessment; waiting after referral for a specialist appointment; and waiting for receipt of an investigation, treatment, or admission ordered by the specialist. Attention has generally centred on the final two sections of the continuum.

The anticipated waiting time for an individual patient is impossible to predict from the number of persons on the list and the rate at which the medical service is dispensed. Many of those patients listed, as noted above, will not require the service, while conversely, new patients with more urgent conditions may be moved to the head of the queue. Equally, however, attempts to express waits as an average of all patient experience are often uninformative. Since some patients will wait, for various reasons, an unusually long time and most patients are likely to wait varying but lesser lengths of time, the data produces a positively skewed frequency curve such that the majority of patients will have been seen prior to the average waiting time (18). Rather than attempting to predict anticipated waiting time accurately from a list or to calculate it for an average patient on the list at a specific point in time, it may be most convenient to assess waits retrospectively from the point of service provision. Unfortunately this approach fails to capture the experience of patients who do not receive the service, such as those remaining on the list or those removed prior to service receipt (19). The alternative measurement methodology is a prospective approach which involves following patients from the time they enter the waiting list until they are removed for whatever reason. While this is the most valid measure of waiting time, it is also the most expensive and time consuming.

## 2.2 Waiting Lists and Health Needs

The existing evidence suggests there is limited correlation between need and current waiting lists. First, as previously noted, when audited, lists are found to include the names of many patients who no longer wish or require the service in question (13, 20). Second, there appears to be substantial variation amongst physicians in the criteria used to assess the need for procedures (21) or place patients on waiting lists for procedures or investigations. Third, there is concern that growing waiting lists for outpatient specialty consultation may reflect inappropriate referral behaviour by family physicians rather than increasing patient need. One British study has examined this issue and found no evidence of an increase in inappropriate otolaryngology referrals when a two month period in 1981 was compared to a similar period in 1989 (22). Finally, in the United Kingdom it is considered likely that some patients with legitimate need are either deterred from seeking care or their family physicians are discouraged from making referrals due to lengthy waiting lists (23). Waiting lists, then, may both over- and under-estimate need.

If waiting lists do not accurately reflect unmet health care *need*, they may reflect unmet *demand* in a given community. It is important, however, to introduce a caveat. The extensive literature on the concept of supplier-induced demand (e.g. 24, 25) suggests that at least a portion of the demand captured on waiting lists reflects physician rather than patient interests. That is, if as well versed in the requisite area of medical knowledge as their doctors, some patients would choose not to demand the service. Waiting lists, then, do not necessarily reflect either needs or patient demand.

## **2.3 Waiting Lists and Equity of Access**

On a national level, as will be discussed below (Section 3.1), waiting lists are associated with the universal access to care characteristic of publicly-funded systems. In the entrepreneurial system in the United States uninsured individuals who might be placed on a list in a publicly-funded system, are simply excluded from service. The system, in effect, ration access according to the ability to pay. Hence, the existence of waiting lists may signify on the part of a health system a commitment to equity of access to services.

If the commitment remains to some extent theoretical, however, it is in part the result of organizational characteristics found at the sub-national or local level. Access problems arise because lists are kept by individual physicians or institutions. The size of and criteria for admission to lists vary substantially between and within provinces and regions, allowing some patients with lesser need to supercede some with greater relative need in the queue for service. Moreover, recent evidence from Ontario suggests that lists may be circumvented by physicians and administrators so as to give preferred access to “special” individuals (26) and that, despite the existence of a province-wide objective triage protocol, patients from more affluent neighbourhoods receive cardiac surgery more expeditiously (27). Depending on the manner in which they are deployed, then, lists may enhance or detract from the equitable access to health care on the basis of relative need.

## **2.4 Summary**

Waiting lists are seldom an accurate compilation of individuals awaiting medical services and are difficult to interpret in the absence of comparative data. There is a lack of consensus on what periods in the illness continuum constitute relevant waiting time, and disagreement on how this may most accurately be measured. Waiting lists may not be assumed to reflect accurately patient need, nor should they necessarily be interpreted as a barrier to accessing services. Since they are commonly associated with publicly-funded systems, they may actually occur in an environment where universal access is the declared norm.

# **3. Theories of Waiting List Causation**

## **3. State-funded Health Care Systems**

In health care systems which are predominantly state-funded such as those found in the United Kingdom, Canada, New Zealand or Australia, waiting lists are thought to be endemic. This is a product of non-market financing, that is, a divorce between payment and receipt of service (28, 29). In contrast, under the entrepreneurial American system, waiting is generally thought to be less common. This system is distinguished by competition amongst providers who, in order to respond expeditiously to consumer demand, must maintain costly excess capacity. Moreover, since service is rationed on the basis of price, millions of citizens are without access to service, that is, are denied even the opportunity to queue for a service (30). State-funded systems do not carry excess capacity, such that some queuing, a form of non-price rationing, will always be present and will become more pronounced in the face of unusually constrained

resources. In effect, patients may be seen as “paying” largely with their time and/or with the anxiety and potential deterioration occasioned by the waiting process (31).

### 3.2 Health Care System Organization

Several organizational features of health care systems appear to foster the growth of waiting lists. Most significant is decentralized responsibility for list generation, as is the case of Ontario, where lists are almost exclusively created in the offices of individual physicians or hospital diagnostic departments rather than by a regional authority (32). This lack of coordination is compounded by the capacity to control utilization in one sector of the health care system, such as hospital services through global budget restrictions, without a commensurate ability to manage important elements of the demand sector, particularly physician requests for scarce resources. Finally, a system which relies for resource allocation planning on traditional patterns of utilization rather than on need- and evidence-based methodologies is likely to generate waiting for poorly-anticipated service components.

### 3.3 Resource Reductions

It is often assumed that resource reductions lead to longer waiting lists, but reality is far more complex. In the United Kingdom different opinions are offered on the precise effect of resource constraints. Using data from a general hospital surgical service it has been shown that a modest reduction in beds will lead to clear costs savings but at the expense of a dramatic increase in waiting times (33). In contrast, Frankel argues that “long waiting times have at most a tenuous relationship with any lack of ... resources” (34, p.56). The waiting phenomenon is confined to relatively few specialties and within these specialties, relatively few diagnoses. These conditions are perceived by the health system as relatively minor annoyances associated with aging but of little medical interest. This perception, according to Frankel, rather than inadequate resources, explains the waiting lists for these procedures. Beyond this largely theoretical argument, however, at least one study has modelled the eventual effect of *adding* instead of *removing* surgical consultant resources and suggested the effect will be to increase waiting times (35). From the existing literature the connection between varying resource levels and waiting appears largely unpredictable.

### 3.4 Technology

The impact of developments in medical technology, though often cited as contributing to increased waiting, is not certain. Some forms of technology clearly inspire the formation of lists. For example, with the introduction of the anti-rejection drug, cyclosporine in the early 1980s, the number of heart transplantations rapidly increased (36). The success of this technology appeared to stimulate heightened demand which, since the number of donor organs remained stable, led to longer waiting lists (37). At the same time, however, other technical developments in cardiac pharmacology created drugs which allowed some patients to be removed safely from transplant waiting lists (38).

The rapid rise in laparoscopic gallbladder surgery (39) may be a further example. In the latter case, though the hospital stay per case was dramatically reduced, the number of procedures

increased. Patients with other disorders seeking hospitalization may have had more ready access to beds previously occupied by gallbladder patients, but gallbladder patients themselves faced the likelihood of growing queues for laparoscopic surgery.

It is not only new technologies which inspire waiting lists; changing criteria for the appropriate use of established technologies may create demand which strains resources. Both cardiac surgery and total joint replacement are examples of this phenomenon. Periodic alterations in perceptions of appropriate use makes future demand difficult to predict.

It is worth noting a final point about technology: while on occasion it may create new demand leading to new or longer waiting lists, its absence in the face of growing need can be an equally potent stimulus to queue formation. The growing hiatus in Ontario during the late 1980s between diagnosis of a cancer and the initiation of radiation therapy has been attributed in part to a lack of treatment technology (40). It seems reasonable to conclude that, as in the case of resource reduction, the introduction of medical technology may have an unpredictable effect on the size of waiting lists.

### **3.5 Changing Patterns of Disease**

While passing reference is frequently made to the likelihood that changing patterns of disease may contribute to the generation of waiting lists, there are no published studies which document this phenomenon. The assertion, however, seems entirely credible. The sudden appearance and wide dissemination of a serious new disorder such as AIDS might be expected to create, at least initially, queues for treatment and support programs. Similarly, alterations in the patterns of established diseases might also give rise to queuing. For example, death rates from cardiovascular disease have been declining in Canada since the mid 1960s. This is due to many factors including enhanced care of individuals with cardiovascular disease (41). This enhanced care would, of course, include surgical care, for which there are queues.

One consequence of this declining cardiovascular mortality rate is that patients may survive to contract a malignancy. In Canada from the late 1960s to the mid-1980s the incidence of newly-diagnosed cancers and the number of deaths due to cancer increased yearly for both sexes (42). The significant increase in diagnosed malignancies, in turn, has put substantial pressure on Canadian treatment facilities such as radiation oncology centres where waiting times have increased over the last decade to levels judged unacceptable by both Canadian and American physicians (43). Similar pressure has been noted in other jurisdictions such as Australia (44).

### **3.6 Physician Factors**

It is clear that physician behaviour has the potential to contribute to the development of waiting lists in several important ways. Physicians often lack incentives to align their practices with the goals of health bureaucrats or hospital administrators. For example, in the United Kingdom it has been argued that the costs of managing waiting lists efficiently - the goal of administrators - in terms of updating, prioritizing, rescheduling cancellations, computerizing and so on - are born chiefly by physicians through the added time and effort required. Conversely, the

costs of inefficiency are born largely by patients (45). As well, it has been argued that a lengthy individual waiting list may actually be viewed as a testament to the special skills of a physician in comparison to colleagues (46), or may be advantageous in bargaining for additional hospital resources (28).

In addition to the issue of incentives, the manner in which physicians organize their practices may influence list formation. It has been shown in the United States that patients wait longer for an appointment at a prepaid health maintenance organization than with a fee-for-service physician (47). Several United Kingdom studies have reported on the adverse effects which poor internal clinic organization or excess administrative tasks may have on the efficient flow of patients and the consequences this may have for escalation of waiting times (48, 49, 50).

The patterns of clinical behaviour of physicians may contribute to the growth of waiting lists. Referrals by general practitioners can be directed away from consultants with long lists by informing the referring doctors of consultants with shorter lists (51). Close monitoring of waiting lists within individual institutions or regions may reveal physicians with significantly different thresholds for placing similar patients on waiting lists (17, 52). For some of these practitioners, educational interventions may be helpful. For example, when British physicians deliberately employed well-defined objective criteria for admission to a urology waiting list, the size of the list was substantially reduced (53, 54).

### **3.7 Patient Factors**

Patient behaviour may be responsible in some cases for the length of lists and the time which individual patients spend on them. Patients may choose to remain on lists in order to see a specific physician (55) or to secure admission to a preferred long term care facility (56). They may also fail to cancel scheduled out-patient appointments or booked surgery (57), which would have shortened waits for remaining patients. In the United Kingdom many patients are discovered during the auditing of waiting lists to have received care elsewhere, but not to have removed their names from the list (58).

Some patients may wait longer than others due to social, rather than clinical, characteristics. In Northern Ireland, being employed is a predictor of shortened waiting time for angioplasty (59). Patients from more affluent postal-code areas in a Montreal study were noted to experience slightly shorter delays in receiving hip fracture surgery (60). Race has been said to influence receipt of kidney transplantation in the United States with blacks having longer waiting times (61) though this has been disputed (62, 63, 64). In Canada, admission to waiting lists for liver transplantation takes into account the amount of social support available to prospective patients (65).

The clinical character of patients may contribute to the size of waiting lists and the duration of waiting times. It has been suggested in the United Kingdom that certain surgical conditions, usually associated with the elderly, are implicitly deemed unseemly and of little concern. Thus hernia repair, varicose vein stripping and haemorrhoid removal are covert diagnostic tickets to excessively long waits for admission (34). Similarly, in the United States, hospitalized patients with emotional disorders and those with little prospect of improving with

rehabilitation therapy have been shown to have longer waits for discharge to nursing homes than patients lacking these characteristics (66).

### **3.8 Population Aging**

Many of the services for which there is contemporary concern about growing waiting lists, such as cataract surgery or joint replacement, are services that are predominantly associated with older patients. Since older age groups are growing, there is concern that the associated demand for constrained resources contributes to waiting lists. Even when it is acknowledged that at present only persons 75 years of age and over consume a disproportionate amount of health services, aging remains of concern in reference to the provision of specific services (67). For example, concern has been expressed in Ontario that access to dialysis is increasingly delayed despite a doubling of the population-based rate of dialysis from 1982 to 1991. During this period the average age of patients receiving hemodialysis increased from 50 to 57. Patients 75 and over demonstrated the most rapid compound growth rate at 17.3% annually. These patients represented 5% of new patients in 1982 and 13.5% in 1992, a change consistent with national and United States data (68).

These figures are cause for concern since the proportion of Canadians over 65 is expected to increase from 11.7% in 1991 to 14.1% in 2011 (69). This has implications for a variety of medical services in Canada already found to be under pressure from increased demand from older patients such as radiation oncology (40). Indeed, the estimates from the National Cancer Institute of Canada suggest that almost a third of the increase in cancer incidence from 1991 to 1999, can be attributed to population aging (70). Given the established link between increasing age and the increased likelihood of chronic disease, it seems reasonable to conclude that for a number of services an aging population creates heightened demand which may, in turn, create longer waiting lists.

### **3.9 Summary**

The cause of waiting for medical services is complex and multi-factorial. Waiting lists are likely endemic to state-funded health care systems. This is exacerbated in decentralized systems which give rise to variation in the size of waiting lists and times waited across regions, institutions and physicians. The degree to which resource reduction or the deployment of technology influences lists is not uniform and may be mediated by local or individual circumstances. Population aging, physician practice behaviour, changing patterns of disease, and patient characteristics may have a significant impact on list formation.

## **4. Views of Waiting List Effects**

### **4.1 Impact on Patients**

Lengthy waits for medical services adversely effect patient *quality of life*. A Canadian study used two validated measures of health status to show that following hip or knee replacement patients experienced markedly less pain and role limitations than while awaiting surgery (71). Similar results were obtained in studies of United Kingdom patients awaiting

orthopaedic procedures (72, 20). The quality of life for urological patients awaiting transurethral surgery for benign prostate disease has been shown to improve following surgery (73), as has the self-assessed quality of life by heart transplant recipients compared to patients who remain on the waiting list (74). Referred to but seldom studied in detail (75, 76) is the likelihood that the diminished quality of life for waiting patients may be associated with deteriorating economic circumstances. For example, a British study of patients awaiting orthopaedic surgery found one in eight patients had to give up employment due to symptoms (72).

Waiting also influences the emotional states of patients and their families. Canadian patients awaiting an opportunity for cardiac bypass surgery display increased levels of anxiety (77) and fear (78). It should be noted, however, despite the emotional turmoil of waiting, the vast majority of Canadian patients undergoing coronary bypass (96%) have been found to consider the process of queuing by medical need to be fair (79) and a similar percentage (93.2%) of patients receiving knee replacement found their waits acceptable (80).

The degree of *morbidity* of patients awaiting medical treatment may increase. An Australian study found 25% of patients felt they had deteriorated while awaiting surgery and surgeons concurred with this belief in 14% of cases (14). Similarly, in a British study, 50% of waiting surgical patients believed their clinical status had declined (81). However, the literature on this issue is far from unanimous. For example, a British audit of an ophthalmology list discovered 10% suffered from conditions that had the potential to lead to irreversible visual loss (82). In contrast, other researchers in the United Kingdom were unable to demonstrate any adverse consequences to delays in tonsil surgery (83) or in urological surgery (84). An extensive review of delays in the treatment of breast cancer provided no definite evidence on the consequences of delays once patients sought medical attention (85).

*Mortality* is a well-defined outcome which has been studied in relationship to waiting times. A Manitoba study of six years of administrative data concluded that urgent cardiac cases received expeditious surgery, while non-urgent cases who waited showed no increased risk of death (86). A similar conclusion was reached concerning the Manitoba experience with waiting for cardiac catheterization (87). An Ontario study reviewed the experience for 8,517 consecutive coronary bypass patients following the establishment of a provincial patient registry in 1991. While in the queue 31 patients (0.4%) died and 3 had surgery deferred after non-fatal myocardial infarction (88). A Halifax study of all patients referred for bypass from Nova Scotia and Prince Edward Island in a seven month period reported a 1.2% mortality rate, spread evenly across four categories of urgency (89). A Montreal group reported no effect of waiting on mortality for elective open-heart surgery (bypass, valve replacement, or both) for a series of 568 patients (90). These results are generally similar to those reported for Europe (91, 92, 93).

It appears that waiting time for cardiac surgery, potentially one of the most dangerous of medical waits, does not significantly alter mortality risk. This may reflect an increasingly sophisticated ability to triage patients and manage their waits so as to avoid fatal outcomes (94). Only waiting times for the treatment of potentially curable malignancies might be expected to show an equally important link with mortality. While the literature makes clear that Canadian waiting times for radiation oncology are inappropriate by international standards (43), the precise impact on clinical outcomes remains as yet uncertain.

## **4.2 Impact on Providers**

There is very little well-documented information about the impact of waiting lists on physicians and none on other important providers such as nurses or hospital administrators.

Waiting lists are a source of frustration to physicians who feel themselves deprived of the ability to deliver clinical care in an optimal fashion (95), a situation which may also raise issues of medico-legal liability (30). Moreover, physicians are uncomfortable with the ethically ambivalent role into which, as a profession, they have unwittingly been cast. On the one hand they are required to act as the patient's advocate, while on the other, they are expected to ration scarce health resources on behalf of a constrained system (96, 97). This discomfort may explain why physicians, reputed as a group to resent any intrusions on individual clinical autonomy, have, in fact, welcomed objective systems of clinical prioritization. Physicians in both Ontario and New Zealand have readily adapted to centralized systems to allocate coronary bypass on the basis of documented clinical need (98, 99). For doctors, as for their patients, waiting lists exert a negative impact.

## **4.3 Impact on the Health Care System**

Waiting lists have the capacity to influence adversely public perceptions of and confidence in the health care system. Such perceptions are influenced by media reporting of apparent deficiencies in the system (30, 96, 95), a phenomenon poorly documented but apparently noted also in Australia (100) and the United Kingdom (29). This type of adverse publicity may serve a useful role by motivating politicians to focus their attention on issues of health care access and by compelling decision makers to give priority to areas beleaguered by inordinate waits (101).

Waiting lists may have a variable impact on the costs of the health care system. They allow the health system to control costs through non-price rationing, that is, to keep costs stable by choosing, in the face of rising demand, not to increase resource inputs, but rather, to let waiting times increase. As well, the costs of non-essential segments of the publicly-funded health care system may be encouraged to shift to the private sector by allowing the development of waiting lists.

Waiting lists may increase the economic costs of illness by keeping some citizens waiting in a state of health incompatible with productive employment (102, 103). The magnitude of this cost is uncertain, but a Canadian study has estimated the lost productivity to be in the same range as that due to labour disputes (76). As well, there are additional costs to the health system associated with the delay of treatment of patients who deteriorate while awaiting care (104). Waiting lists may also encourage costly misuse of the health system. For example, a significant correlation has been found between the length of waited and failure to attend initial appointments (105).

Waiting lists may influence the health care system in another important area: resource allocation. Growing waiting lists may act as a warning flag that a demand and supply mismatch is evolving for a particular service. This was the case in Ontario in the case of access to coronary artery bypass surgery in the late 1980s (106, 107). Escalating waiting times may be of use to

hospital administrators or regional authorities as a bargaining chip in the quest for enhanced resources from provincial governments. Finally, the existence of lengthy lists for a specific service in a particular region may redirect the flow of patients in unanticipated ways, in turn, creating pressure on substitute services or the resources of contiguous regions.

#### **4.4 Waiting List Benefits**

Though out-weighed by disadvantages, some benefits to the health care system and individuals do result from waiting lists. In reference to the broad health system, waiting lists avoid the necessity of maintaining costly excess capacity, such as is found for certain types of service in the United States. In the publicly-funded systems in Canada waiting for elective services is the price to be paid for universal access to a system which imposes no direct financial cost to the patient (108).

Both patients and physicians may derive benefit from waiting for treatment. Patients are given an opportunity to consider whether they actually wish to undergo proposed treatment. Audits of British of orthopaedic and urology waiting lists suggest between 17 and 31% of patients no longer wish surgery (13,109). Waiting also confers the necessary time to make important financial, legal or domestic arrangements, particularly with reference to post-hospital care (100). From a clinician's point of view, waiting may have advantages as well. Some patients improve with "tincture of time" (83) such that the benefits of treatment are out-weighed by the risks. Waiting also allows clinicians to rethink treatment options. New types of diagnostic tests, new treatment modalities, or simply better evidence as to the appropriate use of existing interventions may become available to redirect decision making. Finally, properly managed waiting lists offer physicians the opportunity to prioritize patients on the basis of clinical need, thereby ensuring the greatest benefit accrues from their treatment interventions.

### **5. Dealing with Waiting Lists**

#### **5.1 Tactics to Manage Waiting Lists**

Many specialties and jurisdictions view growing waiting lists as a problem of resource organization and utilization which is amenable to improved management techniques. The following are the most important management strategies described in the literature:

- *Patient Prioritization*

Rather than allocating services to patients simply on the basis of the order in which the queue was entered, patients can be prioritized by various methods. By far the most favoured method is based on objective clinical criteria. The Ontario experience since 1991 in operating a province-wide priority-based registry of patients awaiting coronary bypass surgery illustrates the success of such efforts (88). Though purely clinical prioritizing appears to be the methodology most compatible with shared assumptions about equity in health care, other criteria has been proposed. Patients, for example, have been surveyed as to how factors such as age, smoking status or the availability of home support should be used in prioritization (110). There is some Canadian evidence that

surgeons implicitly take employment status into consideration when determining priority for surgery (111).

- *Centralized Lists*

In many jurisdictions waiting lists, excluding those for hospital-based diagnostic services, are maintained by individual physicians. This approach inhibits an overall awareness of waiting times for a particular service, allows manipulation of lists by doctors (e.g., large lists may be taken as an endorsement of particular expertise), permits abuse by patients who secure a place on more than one list, and distorts the ability to allocate resources according to accurate projections of current demand. Most importantly, the lack of coordinated decision making means significant variation in the severity of need of the patients who receive the service. In contrast, centralized waiting lists servicing the patients of all physicians in a particular specialty, usually surgical, have been shown to be more efficient and accurate (46, 112, 113). In Canada such centralization is likely rare. A 1992 study of British Columbia secondary and tertiary care institutions revealed that in 10 of 17 institutions lists were held by individual surgeons, while 7 were maintained by departments of surgery, admissions departments or operating rooms. In 13 of the facilities the decision as to the next patient to be admitted was made by individual surgeons (32). As shown by a recent Health Canada study, this situation is typical of most hospitals and regional health authorities in Canada (114).

- *List Audits & Reassessments*

A number of studies in the United Kingdom and elsewhere have shown that when long waiting lists are audited by service providers, many individuals on the list are found to have died, moved away, received the service elsewhere, no longer require the service, or refuse the service when offered (13, 11, 109). As well, if referring physicians review their list of referred patients, a significant number may be removed from the list for similar reasons (115). By ensuring periodic reassessment of patients, last minute cancellations can be avoided and lists shortened by removing patients whose clinical status has changed (116). There are no reports of such audit or reassessment interventions in Canada.

- *Waiting List Manipulation*

Health care providers have attempted to change the way lists themselves are constructed. In the U.K. some surgeons have done away with the uncertainty of waiting lists and replaced them with pre-arranged admission dates. This may have reduced the number of patients who do not attend for their admission and the number who are admitted through emergency departments (117). The problem of patients who do not keep appointments is very high for waiting list patients in the United Kingdom (118). In one study, for example, prior notification by patients of their intent to miss an outpatient appointment would have reduced waiting time from six months to one week (119). However, the problem is by no means confined to Britain; American (120) and Canadian studies (121) have also explored ways of communicating with newly referred patients in order to minimize the “no-show” rate. Finally, referrals to waiting lists can be redirected. In the United Kingdom it has been shown that general practitioners, if sent monthly bulletins as

to waiting times for outpatient consultation and inpatient treatment, are willing to redirect their referrals to the sources with the shorter waits (51).

- *List Clearing*

In the United Kingdom a number of initiatives have been directed at the backlog of patients on specific waiting lists. These projects usually involve minimal extra resources, re-configure existing resources only temporarily, are focussed exclusively on patients who have been on surgical lists over a specified length of time, succeed in reducing the number of patients waiting longer than the specified length, and are of variable long-term efficacy (122, 15).

- *Guaranteed Maximum Waits*

In both the United Kingdom and Sweden the resources necessary to honour maximum wait guidelines have been made available for selected conditions such as coronary bypass grafting or cataract surgery. In Sweden this program appears to have partially met its goal by increasing productivity and improving waiting list management (123).

## 5.2 Waiting Lists and Resource Augmentation

Lengthy waiting lists may give rise to suggestions that additional resources would reduce waiting times. Ontario's successful attack on coronary artery bypass queues in 1989-90, for example, combined organizational changes with enhanced resources (30). There are also examples from the United Kingdom of successful reductions in waiting times after an infusion of additional financing. In the case of general surgery (15, 124), ophthalmology (82), and urology (109) list audits combined with additional dedicated surgical resources appeared to reduce lists within limited follow-up periods.

Many other attempts at reducing waiting lists by adding resources do not appear to have succeeded. A British study of an attempt to reduce an orthopaedics waiting list by adding weekend surgery found the list remained static (125). In general surgery an initiative targeting patients who had endured a lengthy wait did, indeed, reduce long waits, but compromised access for patients with potentially more serious conditions who had not yet experienced long waits (126). One-time investments to reduce waiting may result in improvements which prove transient, as shown by a British study of an ophthalmology initiative (127) and a large Swedish study of a variety of surgical procedures (123). Nor is this lack of improvement confined to surgery. Studies of long-term care waiting lists in the United States (66, 128), and Australia (129) suggest that additional beds will do little to resolve the waiting problem.

Far from reliably reducing the size of waiting lists, extra resources in the United Kingdom may well have the opposite effect. A study of several surgical services in the Oxford area found that as the number of hospital admissions from the list increased so, too, did the length of the waiting list (130). This phenomenon has been referred to as "feedback" and describes the tendency of family physicians to preferentially increase referrals to services which appear to have shrinking waiting lists, thereby off-setting any gains (131). As well, adding surgeons to a hospital may initially reduce pre-existing lists but will, within two years, spawn new lists (35). Hospital-

based physicians, it has been argued, have no real incentives to cut waiting lists (132) and in the face of new resources may reassess what “needs” to be treated, thus lengthening lists rather than reducing them (45). An Australian study notes that hospital managers who receive extra resources to deal with long waiting lists have little incentive to reduce lists if they are apparently to be rewarded with augmented resources (100). This brief review of the relationship between waiting lists and enhanced resources suggests that it is by no means axiomatic that additional resources will reduce waiting times.

### **5.3 Waiting Lists and Private Care**

It is frequently suggested that the option of privately purchasing medical services would reduce waiting in the public sector. This does not appear to have occurred in the United Kingdom despite the option of “going private” which is exercised by 13% of the population (133). Approximately 20% of non-urgent heart surgery is done privately, a figure comparable to that in New Zealand (134). The bulk of private surgical work focuses on hips, hernias, haemorrhoids, cataracts and gynaecology. These are some of the conditions with the longest waiting times in the public sector and, indeed, the areas in Britain with the longest waiting lists have the highest rates of private surgery. There is concern that this link reflects the ability of surgeons who maintain long waiting lists to encourage better-off patients to jump queue and pay for elective surgery privately (29).

In Canada it is generally not possible to purchase privately those medically necessary treatment or diagnostic services for which significant queuing exists. Some patients may seek treatment in the United States privately, and provincial governments in times of acute shortage may contract with American providers (96, 95). In the United Kingdom it has been suggested that the public system could subsidize patients seeking private care up to the current cost of public care (132, 28). This is similar to a model of publicly-financed competition for primary care discussed for Canada (135, 136). It is doubtful such options will find acceptance by a Canadian public who cherish a universal, publicly-funded system. For example, when Manitoba cataract patients were surveyed after surgery only 15% responded that they would be willing to pay for private care or to pay increased taxes to guarantee more rapid access to the public system (137). Similarly, Canadian knee-replacement patients, though waiting longer than American recipients, found waiting times acceptable in over 85% of cases surveyed (80, 138). The willingness to accept current waits and the unwillingness to pay for alternatives, suggests there is little room for policies designed to encourage a private alternative to publicly-funded care in Canada.

### **5.4 Waiting List Information Requirements**

Waiting lists should capture information deemed relevant by all stakeholders. Arguably, waiting begins when a patient books an appointment with a family physician, and certainly includes the time elapse from the family physician’s referral to the date of specialist consultation. Most studies of waiting lists focus only on the time between first specialist visit and receipt of specific diagnostic or therapeutic interventions.

Regardless of the time period studied, it is necessary to select a standard approach to collecting data. As noted in section 2.1 above, the cross-sectional method describes the waiting

times of patients then on a waiting list and is defined as the time between list entry and an arbitrary cut-off date. A retrospective approach reports the waiting time experienced by patients who receive a service; however, it provides no information on patients who continue to wait for servicing. A prospective approach, the most reliable but costly method, follows patients from the time they are placed on a waiting list until they receive service. While the retrospective and cross-sectional measures are the most commonly used approaches, they may result in markedly different results (139).

Three further types of information are necessary to interpret published waiting lists. First, it is important to understand how patients enter the list. It may be done simply on the basis of referral order, or there may be a formal triage process which attempts to prioritize patients by severity of illness. Second, it is important to know whether lists are routinely audited so as to remove the significant percentage of patients usually found to inappropriately populated waiting lists. The presence of such apocryphal patients will significantly skew any attempt to report waiting times. Finally, information on severity is critical in order to understand the relationship between the waiting experience and clinical outcomes; that is, only patients of comparable clinical status can be compared with each other.

## 5.5 Setting Appropriate Waiting Times

Knowing what waiting times are for a specific service in a given jurisdiction is essential, but it is only the first step in managing waiting lists. It is then necessary to decide what constitutes appropriate waiting time. The following methods are among the options for making such decisions:

- *Government Standards*

In Sweden, Norway, Denmark and the United Kingdom government has established guaranteed waiting times for specific procedures and has provided financial incentives for providers to achieve these levels. The precise mechanisms by which the target times are selected is not clear, but may reflect a subjective assessment of what is “reasonable”, coupled with what is deemed achievable (123).

- *Stakeholder Consensus*

It is possible to survey patients (79), hospital administrators (101), consultants, and referring physicians (140) to derive a consensus view of appropriate waiting times.

- *Clinical Criteria*

Maximum waiting times may be defined according to clinical criteria in two general ways. First, in the absence of objective, established standards, it may be necessary to seek a consensus from experts in the field. This was the approach used in Ontario to initiate the provincial program for coronary artery surgery (141) and has also been used for the same purpose in New Zealand (99). Second, evidence may be gathered as to the clinical consequences of delay so as to determine limits within which patient safety is not compromised. This approach to matching urgency classification with time guidelines was used in Alberta by the Provincial Advisory Committee on Cardiovascular Services. It

tracked patients for a 3-year period and adjusted guidelines after documenting that median waiting time to adverse events occurred much earlier than expected (142). As well, validated instruments exist which can be used to assess objectively non-life-threatening aspects of waiting, such as pain and social functioning, from which to derive thresholds for timely intervention (71). Finally, simulations of the biological events in the chronology of a disease process may help to determine the window of safety for delaying treatment. This approach has been used in radiation oncology to predict the effect of delay on local control of malignancies (143).

A word of caution is in order: while a rating system may determine appropriate waiting times for individual clinical conditions, these disease-specific urgency ratings can not be easily compared across conditions. Future research is necessary to establish the feasibility of a method to yields comparable ratings across all conditions so that resources may be allocated among sectors and waiting times managed for the entire health system.

## **6. Studies on Waiting for Medical Services in Ontario**

### **6.1 Cardiac Care**

Ontario experienced a significant mismatch between the demand for, and supply of, coronary artery bypass graft surgery [CABG], resulting in long waiting lists in 1987-88 (107). One consequence of this situation was a process to develop an urgency ranking system for patients referred for surgery (144, 141), which found rapid acceptance among specialists in the province (98).

Simultaneously, the Cardiac Care Network of Ontario [CCN] was funded by the provincial government to ensure timely access to cardiac surgery for patients on the basis of urgency. It employed the consensus guidelines described above and subsequently adopted by the Canadian Cardiovascular Society to allocate service to individuals on the basis of clinical priority (145). An analysis of the first 21 months of operation established, first, that the mortality rate while waiting for surgery was very low (0.4%) and, second, the most important determinants of waiting times were symptom status and angiographic results (88). A later analysis of mortality figures for the period from 1991 to 1995 reported an almost identical mortality rate of 0.48 % (146), a level approximately one tenth that found in New Zealand where similar triage guidelines but fewer resources were used (147).

The CCN was able to alert government that waiting times for elective, though not urgent or semi-urgent, surgery began to rise again in 1995 and worsen in 1996. The Ministry of Health provided a major increase in funding to clear the backlog and to enhance future capacity so as to achieve annually a regional target rate of 100 CABG procedures per 100,000 population. While these Ministry targets for 1997-98 were attained at only one of the eight Ontario surgical sites, by late 1997 the waits for elective procedures had begun to fall and the chances of receiving surgery within the time limits recommended had increased. The authors of the most recent study of the CCN concluded, appropriately, that Ontario was a world leader in monitoring and managing waiting lists for cardiac surgery (148).

Such a conclusion, of course, is not to suggest that room does not exist for improvement. Access to outpatient cardiology appointments may be sub-optimal in some regions (149) and for procedures such as non-elective pacemaker insertion delays are strongly associated with adverse events suggesting a need for improved list management strategies (150). Access to angiography (151) and other advanced cardiac procedures (152) has been shown to favour patients in larger hospitals which offer the services in comparison to those referred from community hospitals. Of more concern is an apparent social triage. A survey of Ontario cardiac surgeons, cardiologists, hospital executives, and a random sample of internists and family physicians revealed that more than 80% of physicians and over half of hospital chief executives had been personally involved in expediting access to cardiovascular care for individuals on a basis other than clinical need (26). These results may contribute to an explanation for the finding that, based on administrative and census data, patients from more affluent neighbourhoods wait shorter periods for angiography (27). Despite these legitimate concerns, however, at least with respect to CABG surgery, Ontario citizens receive necessary care in a timely fashion.

## **6.2 Orthopaedics**

Studies of orthopaedic waiting times in Ontario have to date focussed largely on joint replacement. Patients undergoing knee-replacement surgery in the period 1985 to 1989 have been surveyed and found, in comparison to American patients, to have significantly longer waits for an initial consultation (2 weeks vs 1 month) and for subsequently booked surgery (3 weeks vs 2 months). While a higher percentage of the American patients found their waiting time for surgery acceptable (95 vs 85%), the level of satisfaction with overall care (85 vs 83.5%) was comparable (138, 80). The South-western Ontario Joint Replacement Registry Pilot Project, based on the patients attending 19 regional orthopaedic surgeons, when published will update these figures for a six month period in 1998-99 (153).

Despite a high level of acceptance of the waiting experience, interviews with patients before and after hip or knee surgery in Ontario have shown, first, that receipt of surgery is unrelated to the reported severity of symptoms, and second, following surgery there is a dramatic decrease in symptoms. These findings suggest that structuring queues based on the burden of symptoms could reduce the aggregate pain and disability of such patients (71). This prioritization process could be based on two sources of information: patient reported symptoms using validated severity indexes (154) and the physician-generated, consensus-based clinical criteria, the feasibility of which has been demonstrated in Ontario (155). Researchers at Queen's University are currently developing a waiting list algorithm for hip and knee replacement which incorporates both quality of life measurements and objective clinical criteria (156).

The Institute for Clinical Evaluative Sciences is monitoring times between consultation with an orthopaedic surgeon and the date of surgery, the first results from which were published in 1998. Median waits were calculated for hip and knee replacement in 1995-96 using the dates of consultation and surgery extracted from billing data. For the former procedure waiting ranged from 8 to 42 weeks across 16 regions, while for the latter operation the range was 12 to 36 weeks. As well, a survey was used to determine a provincial mean waiting time of 7.1 weeks for non-urgent consultation with a rheumatologist (157).

### **6.3 Cancer Care**

Despite the increasing importance of cancer care in a province with a growing number of elderly citizens, relatively little research has been published on the issue of waiting for treatment. The exception to this is an important study which examined the interval between radiotherapy consultation and the initiation of treatment for five types of malignancy at seven Ontario centres between 1982 and 1991. While there were found to be significant inter-centre variations, for every type of cancer the median waiting time in Ontario as a whole increased steadily over the study period. The majority of patients treated in Ontario in 1982 met the Canadian Association of Radiation Oncologists' guidelines recommending consultations occur within two weeks and treatment commence within another two; in 1991 few patients received treatment within these recommended intervals (40).

The situation does not appear to have improved since 1991. While there is little readily accessible information on medical or surgical oncology, some data are available for radiation therapy. In February of 1999 only 29.8% of patients referred for treatment in Ontario commenced therapy within the maximum recommended period of four weeks, while 41.5% waited more than eight weeks (158). This situation was in part a reflection of a shortage of personnel, including an estimated short-fall of 60 radiation therapists and 19 physicists across Ontario, and 7 radiation oncologists in the Toronto area alone. In collaboration with the Ministry of Health, Cancer Care Ontario and the Princess Margaret Hospital initiated a program of sending patients to treatment centres where waiting was not a problem. Between March 30 and June 25, 1999 one hundred and seventy patients travelled to distant centres for therapy, the vast majority going to the United States (159). While it is difficult to draw a causal connection with the new program, the number of Ontario patients receiving treatment within the recommended times rose in September to 35%, while only 38.5% waited more than eight weeks (160).

As in the case of cardiac care, some of the subtleties in the allocation of cancer treatment are only beginning to be investigated. For example, while the percentage of women with breast cancer who receive radiation therapy within one year of diagnosis more than doubled between 1982 and 1991, it has recently been reported that there is substantial variation in the pattern of its application. The use varied by region from 25 to 45 %, and both advancing age and residence in lower income neighbourhoods was associated with decreasing likelihood of treatment (161). These findings suggest that even under a universal health insurance system, and even if the majority of patients are treated within recommended times, unrecognized allocative inequalities may persist.

### **6.4 Other**

Beyond research in the three high demand areas discussed above there are few published studies on waiting issues in Ontario.

The subject of renal dialysis has been reviewed where, despite a doubling of capacity between 1981 and 1992, there is increased queuing. A number of demand factors, such as an increase in the number of patients referred for and surviving on treatment, and supply factors, including funding constraints, have combined to create this situation. Better data on demand, and

more developed methods for allocative consistency and prioritization are seen as possible solutions (162).

Despite considerable enthusiasm for implementing new methods of remunerating physicians, relatively little is known about the impact such innovations may have on waiting times. In 1994 all specialists at the health sciences centre in Kingston switched from individual fee-for-service payment to annual envelope funding for the entire centre. Outpatient referrals from twenty-six family physicians were studied for two years before and two years after implementation of the alternative funding plan. Waiting times for appointments with clinicians in the plan increased modestly but so, too, did times for physicians not participating in the plan. Moreover, the changes in waits varied widely across departments from a mean eleven-day decrease to a twenty-day increase. The study concluded that the new funding plan was not associated with a reduction in access to outpatient care (18).

Surgical waiting times have also been studied for the Kingston region. While waiting time changes varied across surgical specialties before and after the introduction of the new payment method, at the two teaching hospitals there was an overall increase in waiting times for elective surgery in excess of 25%. However, these changes, in view of province-wide restructuring in the hospital sector and a lack of comparative regional data, could not be attributed solely to the change in funding (163, 164). The hospitals have since received funding from the Ontario Hospital Association's Change Foundation to mount a web-based waiting list for all surgeons so as to expedite referral selection by patients and family physicians

## **7. Conclusion: Summary and Future Directions**

Most patients in Ontario receive urgent medical care in a timely fashion. Whether the same can be said for elective or non-urgent care is less clear. Researchers, care providers, patients, and decision makers are inhibited in their understanding of this issue by a lack of both primary data and published studies. Never-the-less, on the basis of the material reviewed in this paper certain conclusions seem warranted:

- There is substantial confusion about waiting time terminology, measurement, and significance. However, it is apparent that waiting lists are a poor reflection of patient need.
- Waiting lists are caused by many factors. They are endemic to state-funded systems and, in fact, may attest to the presence of universal access to care. However, the precise interplay of various factors such as population aging or changing disease patterns is unclear.
- Waiting has been shown to impact adversely on patients' quality of life. An impact on morbidity is more difficult to establish and a significant effect on mortality has not been demonstrated.
- Tactics exist to significantly improve waiting list management. The allocation of additional resources, without first deploying improved management strategies, is unlikely

to be efficacious. Based on the British experience, supplementing publicly-funded care with a private payment system will not necessarily reduce waiting in the public system.

- In Ontario, waiting for cardiac surgery has been effectively managed by a province-wide initiative based on objective clinical triage. Joint replacement and cancer care are two other areas which currently require attention. In the near future it is likely that additional issues such as access to cataract surgery or to technologies such magnetic resonance imaging will come under increasing pressure.

From the forgoing discussion it will be apparent that the critical issue in Ontario, as elsewhere in Canada, is the lack of accurate information on waiting lists and times. Dealing with this information issue will necessarily occupy the centre of the policy stage in the short and intermediate term. The specific requirements for a systematic approach to waiting lists are as follows:

- A standardized nomenclature and measurement system for waiting times must be encouraged across the province.
- Areas of service provision currently perceived as experiencing problems with waiting times should be identified by representative consensus panels.
- For each such area identified, a panel of relevant experts should devise evidence-based benchmarks for acceptable waiting times.
- Incentives should be offered to physicians and hospitals to initiate centralized information systems for those areas of service known, suspected, or anticipated to experience waiting problems.
- Incentives should be devised to assist providers and institutions to attain recommended benchmarks.
- The public should be informed about current waiting times for key services and educated as to reasonable expectations for all services.

There is reason to believe that governments in Canada recognize the timeliness of such policy initiatives. Health Canada commissioned a national study to gauge the state of waiting problems and the policy response to them in 1998 (<http://www.hc-sc.ca/iacb-dgiac/nhrdp/wlsum5.htm>). Subsequently, the Health Transition Fund has sponsored the Western Canada Waiting List Project in which the health ministries in Alberta, British Columbia, Manitoba and Saskatchewan partnered with four research groups to explore tools for the management of waiting lists for cataract surgery, general surgery, hip and knee replacement, and MRI scanning (<http://www.wcwl.org/>). As well, the British Columbia government launched a web site (<http://www.hlth.gov.bc.ca/waitlist/>) which, though not without its critics, provides the public with direct access to waiting information by procedure, hospital and individual physician. Initiatives such as these, in aggregate, are an encouraging sign: if emulated in all jurisdictions, they have the potential to make a sound health care system even more robust in the new millennium.

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