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Public Solutions to Health Care Wait Lists

By Michael M. Rachlis

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Executive Summary

Waits for care are the biggest political issue facing Canadian health care. Both citizens and providers are concerned that too many waits are too long and put some patients at risk. In June 2005, the Supreme Court added to the sense of crisis by striking down a Quebec ban on private insurance for Medicare-covered services: the Chaoulli decision. Despite the narrow scope of the decision, the verdict was widely seen as a repudiation of Medicare. Across Canada, the operators of private clinics and their supporters have seized upon the Chaoulli decision. They are aggressively developing for-profit clinics to sell services to the public sector and to any individual who has the cash to jump the public waiting queues.

However, before going down this road, Canadians would do well to consider public sector solutions to the wait-times problem. The good news is that many such public solutions are at hand. Here are two of the most innovative ones:

- The health care system should establish more specialized short-stay surgical clinics within the public sector. These clinics provide the efficiencies that private clinics have capitalized on, without siphoning public dollars to shareholders.
- Lessons learned from queue-management theory should be adopted. Examples from both the public and private sectors — such as line-ups at banks and airports — show us how better coordination and flow of queues can dramatically reduce wait times. For example, rather than every surgeon having a separate wait list, patients could be served more quickly if a single waiting list was maintained within a given jurisdiction.

First, the public system should shift as many minor procedures and low-risk elective surgeries as possible (e.g., hip and knee replacements) to short-stay, public, specialized clinics. The Canadian debate has wrongly assumed that the only such clinics are for-profit businesses. In fact, Toronto's Queensway Surgicentre, a division of the Trillium Health Centre (a public hospital), is the largest not-for-admission surgical centre in North America. In 2001, the Manitoba government bought the Pan-Am Clinic from its private sector owners. It now operates as a unit of the Winnipeg Regional Health Authority.

Evidence from both Queensway and Pan-Am suggests that public sector delivery is superior. These clinics achieve the benefits of specialization and innovation normally ascribed exclusively to the private sector, while reducing overall administrative costs and providing broader societal benefits.

The second new public sector approach to health-care waits is the use of applications of queuing theory to manage waits and delays. Queuing theory applications are used to maximize flow in such diverse areas as air traffic control and manufacturing. Rather than thinking of every wait list as a capacity or resource problem, we need to look at delays through the "lens of flow."

Canadians tend to assume that, if there is a wait for health care, there isn't enough of it. But most waiting is not due to lack of resources. For example, even if there is a delay to get into a hockey arena, there will still be seats for all once everyone with a ticket gets in. There's just a bottleneck at the doorway. In fact, most delays are due to poorly designed services. For example, many breast patients have to wait for a mammogram, then wait for an ultrasound, and then wait again for a biopsy. The Sault Ste. Marie breast health centre reduced the wait-time from mammogram to breast-cancer diagnosis by 75% by consolidating the previously separate investigations. If a woman has a positive mammogram, she often has the ultrasound, and sometimes the biopsy as well, on the same day.

We could also eliminate waits for doctors' appointments. Family doctors often have delays of up to four weeks for appointments. The wait is typically shorter just before vacation and longer thereafter, but overall it is fairly stable. A doctor's capacity may be close to meeting demand, but he or she is servicing last month's demand today while postponing today's work until next month. If doctors could clear their backlogs, then theoretically they could go to "just-in-time" servicing, sometimes referred to as "advanced access."

The Rexdale Community Health Centre serves 6,000 patients in a disadvantaged community in northwest Toronto. In 2003, patients faced a four-to six-week wait for appointments. The centre temporarily increased resources to clear its backlog, and now provides same-day service.

Usually, services need to be re-designed as well. The Rexdale CHC enhanced the roles of its nurses, who previously spent a lot of their time telephone-triaging patients who were sent elsewhere for care.

This same plan can be followed for surgical wait lists. First, map the process. At each step, assess whether capacity is sufficient to meet demand. If it is, temporarily increase resources to clear the backlog and go to just-in-time servicing. If capacity is insufficient for demand, then re-design services.

If there is still unmet demand, then a bottleneck has been identified. It requires more resources. Example: We can't fix the delays for hip and knee replacements without paying for more artificial joints.

As much as possible, different steps in the diagnosis and treatment pathway should be consolidated, as with breast health centres. The process should be seamless and guided by patient needs, not those of individual providers or their organizations. Patients want one-stop shopping. Most patients are more than happy to see the first available specialist, especially if that will save them months of waiting. After all, neither patients nor family doctors typically insist upon certain anesthetists, even though that doctor may be as important as the surgeon to the operation's success.

Undue waiting is currently Medicare's Achilles' heel. As the Romanow Report concluded, "long waiting times are the main, and in many cases only reason some Canadians say they would be willing to pay for treatments outside of the public health system."

The enemies of Medicare have used the legitimate public concern about delays in the system to peddle ill-advised policies such as for-profit delivery and private finance. They may claim that private clinics will deliver faster care at a better price, but the peer-reviewed literature demonstrates

that for-profit care tends to cost more while, if anything, providing inferior quality services. Even Alberta Premier Ralph Klein admitted in a candid moment that sending patients to private clinics in his province will cost more than if the services were provided in the public sector.

Of critical importance to the current debate, the pursuit of these public solutions is incompatible with the further proliferation of private, for-profit clinics. Private sector clinics are aggravating personnel shortages, and an increasing reliance on private delivery and private finance will divert more public dollars to shareholders and insurance companies.

These public solutions — specialty clinics in the public sector and application of queueing theory to surgical wait lists — are but two of many alternatives to private finance and for-profit delivery. Others include increasing surgical capacity in public hospitals and putting greater emphasis on prevention. There is no shortage of such solutions *if the political will is present.*

Let's not add private problems to our health care system. We already have the public solutions at hand. Let's put them into practice.

Introduction

Waits for care are the biggest political issue facing Canadian health care. Both citizens and providers are concerned that too many waits are too long and put some patients at risk. In June 2005, the Supreme Court added to the sense of crisis by striking down a Quebec ban on private insurance for Medicare-covered services: the Chaoulli decision. Despite the narrow scope of the decision, the verdict was widely seen as a repudiation of Medicare. Across Canada, the operators of private clinics and their supporters have seized upon the Chaoulli decision. They are aggressively developing for-profit clinics to sell services to the public sector and any individual who has the cash to jump the public waiting lists. Some advocates for more for-profit delivery claim that wait-lists would be solved if the public system contracted out its services to for-profit providers.[1]

This paper takes a different approach, arguing that, before going private, Canadians would do well to consider public sector solutions. This paper focuses on two innovations. First, the public system should shift as many minor procedures and low-risk elective surgeries as possible to short-stay, public, specialized clinics. The Canadian debate has wrongly assumed that the only such clinics currently in operation are for-profit businesses. In fact, Toronto's Queensway Surgicentre, part of the Trillium Health Centre, a public hospital, is the largest not-for-admission surgical centre in North America. In 2001, the Manitoba government bought the Pan-Am clinic from its private sector owners. It now operates as a unit of the Winnipeg Regional Health Authority. Evidence from both Queensway and Pan-Am suggests that public sector delivery is superior. These public clinics achieve the benefits of specialization and innovation normally ascribed exclusively to the private sector, while reducing overall administrative costs and providing broader societal benefits.

The second new public sector approach to health care waits is the use of applications of queueing theory to manage waits and delays. Queueing theory applications are used to maximize flow in such diverse areas as air traffic control and manufacturing. Rather than thinking of every wait list as a capacity or resource problem, we need to think outside the box. We need to examine health care delays through the lens of flow. Queueing theory and other new approaches to wait-list management can be used to re-design services, smooth patient flow, and reduce delays.

These public solutions are but two of many alternatives to privatization. This paper does not address other obvious remedies — increasing surgical capacity in public hospitals, greater emphasis on prevention and healthy lifestyles, to name just a few. The point is that there is no shortage of such solutions *if the political will is present.*

Equally important, the pursuit of many of these public solutions is incompatible with the further proliferation of private, for-profit clinics. An increasing public reliance on these clinics merely diverts public dollars to shareholders and insurance companies. Private sector clinics can also aggravate personnel shortages.

Before outlining these options, the paper reviews the current wait-list situation in Canada and analyzes the problems with traditional forms of management. Then the literature on for-profit clinics is reviewed.

Undue waiting is currently Medicare's Achilles' heel. As the Romanow Report concluded, "long waiting times are the main, and in many cases only reason some Canadians say they would be willing to pay for treatments outside of the public health system."[2] The Supreme Court Justices assumed that there is an automatic trade-off between access and equity. "They (wait lists) are the inevitable result of a public system..." This paper demonstrates that we can keep Medicare and solve our queueing problems with public sector solutions.

Waiting isn't good for people and it may be fatal to Medicare

A 2003 international survey found that Canadians are more likely than citizens of other countries to complain about long health care waits.[3] We know that many people do suffer, or very occasionally die, while they wait. However, patients with urgent conditions such as unstable heart disease or acute leukemia usually don't wait for care. Alternatively, many Canadians have to wait six months or longer for a joint replacement.[4] Not only do these patients suffer pain, but they also are frequently unable to work because of their disability. Patients who wait less before knee replacement surgery, not surprisingly, have better outcomes.[5]

Physicians and others have expressed concerns about excessive waits for patients with slow-growing cancers such as breast, colon, and prostate.[6] Some studies show no decrease in survival if breast cancer patients wait three to six months for surgery,[7, 8] while others show that these delays worsen survival by about 2.5% per year.[9]

Even if these delays don't increase health risks, they often cause anxiety as people wait for diagnoses and then wait for care. There has been an increase in demand for diagnostic testing such as ultrasound, CAT, MRI, endoscopy, and surgical biopsy for people suspected of having cancer. However, most people who have these tests don't have cancer. That's because the initial cancer screening tests done in clinics and doctors' offices, such as mammography for breast cancer, prostate-specific antigen for prostate cancer, and fecal occult blood testing for colon cancer have 80%+ false positive rates.[10, 11, 12] In other words, the vast majority of patients with positive tests do not have cancer, but need further diagnostic testing to be sorted out.

An English study found that decreasing the delay for definitive testing and then treatment of breast cancer decreased short-term anxiety.[13]

We don't have good data, but some waiting is getting better and some worse

As the federal, provincial, and territorial governments work to develop benchmarks, indicators, and targets subsequent to their September 2004 Health Care Accord, it has become clear that there are very little data available on wait times. There is a particular paucity of data that is comparable, which is why the governments are labouring so hard to come up with basic measures of access.

Seven provinces have established wait-list websites, where some data on access for services are available. New Brunswick, Prince Edward Island, and Newfoundland/Labrador hope to have their websites running by 2006. (***The websites are listed in Table One.***) The data typically include various statistics on wait times for different procedures (sometimes by urgency of condition) by different doctor and/or by hospital in the previous

TABLE 1 Provincial government waiting list websites

Nova Scotia http://www.gov.ns.ca/health/waittimes/

Quebec http://www.msss.gouv.qc.ca/en/sujets/organisation/waiting_lists.html

Ontario http://www.health.gov.on.ca/transformation/wait_times/wait_mn.html#

Manitoba http://www.gov.mb.ca/health/waitlist/index.html

Saskatchewan http://www.health.gov.sk.ca/ph_op_sscn.html

Alberta http://www.health.gov.ab.ca/waitlist/WaitListPublicHome.jsp

British Columbia http://www.healthservices.gov.bc.ca/waitlist/

three months. However, these numbers are typically provided by physicians and are not independently verified.

Early in 2005, the British Columbia government claimed that a preliminary audit of the 80,000 people waiting for surgery revealed that up to 6,000 may have had had their surgery elsewhere, died, or were on more than one list.[14] In other jurisdictions, similar inaccuracies have been found.[15] While these factors artificially inflate surgery lists, other factors falsely deflate them. For example, those patients still waiting for a specialist appointment to get into the queue don't yet show up on official surgery wait-lists.

The Fraser Institute has conducted surveys of Canadian doctors about wait times since 1992.[16] The Fraser Institute survey has not been published in a peer-reviewed journal, and the physicians' responses are not validated. However, the Institute has made attempts in recent years to validate their data with those published by provinces. The Fraser Institute surveys show a doubling of wait times from family physician referral to specialist consultation in the past 12 years, although there has been a modest improvement in the last year.

Why waiting may be getting worse

There are several reasons why waiting may be getting worse. But one of them may be the attempt to run the system at too high a rate of utilization. Normally, we assume that 100% utilization is better than 95%, which is better than 90%. However, high utilization rates can actually cause queueing problems.

For example, when the number of cars on a highway increases and they travel closer and closer to each other, one car braking can lead to a complete standstill, even if there isn't an accident. On a very crowded highway, it typically takes only minutes to create a traffic jam, but hours to relieve it.

In Canada, hospitals typically operate at over 90% capacity. At this level of utilization, patient flow frequently stalls when unplanned emergency patients present. Often booked elective patients sit in gridlock.* For example, in January 2005, British Columbia's Fraser Health Region had over 100 admitted patients waiting in their emergency rooms.[17]

* In many hospitals, there are surgical rooms that, due to funding decisions, sit unused. Private clinic surgeons frequently point to these unused operating rooms as the reason they choose to practise in private clinics. They claim they cannot get enough operating time in the public hospitals, and they are often right. But the appropriate solution, in this case, is to increase the capacity of the public hospitals and clinics.

Traditional Canadian wait list initiatives haven't worked

Canadian wait-list initiatives over the last ten years have focused on Internet postings of wait times, urgency prioritization of patients, and temporary extra resources to clear backlogs. The September 2004 First Ministers' Agreement on Health focused on five areas (cancer, heart, diagnostic imaging procedures, joint replacements, and sight restoration) where undue waiting was felt to be a particular problem. Most provincial strategies on wait lists continue to emphasize the need to provide more system capacity. These policies make intuitive sense, and it is understandable that governments have focused on them. However, they are not true long-term solutions, and frequently may lengthen delays even further.

Internet postings of wait times

British Columbia's heart care program and the Cardiac Network of Ontario have posted their wait times on the Internet for almost a decade. The hope was that, in doing so, people would see which surgeon or facility had shorter waits, and move accordingly. However, as of the summer of 2005, Toronto waits for elective heart catheterization varied from three to 44 days, depending upon the hospital,[18] while Vancouver waits for elective heart surgery varied from less than one week to 16.6 weeks, depending upon the surgeon.[19] People clearly aren't using this information to move from one provider to another. Typically, their family physicians refer them to cardiologists and from there to cardiac surgeons. However, up until recently, each surgeon has kept his own wait list and there is very little, if any, sharing between doctors.* Patients are extremely unlikely to ask their family doctors to refer them to other surgeons. It is true that, if there were a way for patients to move quickly to the provider with the shortest list, average wait times would indeed shrink. However, this does not occur by simply passively providing the information.

The Cardiac Care programs in British Columbia and Ontario certainly have accomplished some things. Until provinces established these programs, low-risk patients at no vital peril sometimes had their surgery months before those at great risk. But the Cardiac Care Network's wait management techniques are limited in their application to other clinical situations. Even though prioritization seems to make sense and may be necessary in certain situations, like heart surgery, it often makes waiting worse.

* As of March 2005, the Ontario Network has had the authority to intervene to suggest patients move centres or surgeons.

Urgency prioritization of patients

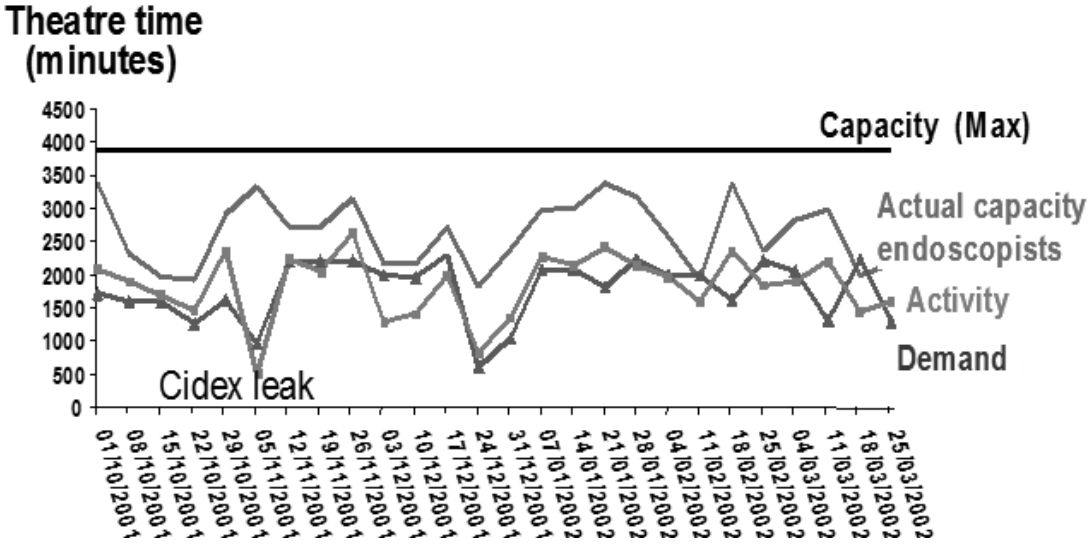
Prioritization of patients for urgency seems like a sensible method of allocating scarce resources. After all, on a battlefield littered with bodies but short of surgeons, not everyone can be saved. The original definition of "triage" comes from Napoleon's surgeons' three categories for the wounded: those who would die whatever care they might receive, those with minor injuries which could safely wait for treatment, and those who might lose life or limb if not treated immediately.

British thoracic surgeon, Dr. Richard Steyn, who is also the clinical lead for wait-list reduction within the National Health Service's Modernization Agency, gives an example of the problems created by prioritization. The endoscopy suite at the Birmingham Heartlands Hospital had a wait of 120 days for appointments. The staff initially thought that there was insufficient capacity. However, when the staff examined the data, it was clear that capacity should have easily been sufficient. Figure 1 shows that the maximal capacity (the procedure room staffed and patient prepped) was substantially greater than the average demand and higher than any demand peak. The actual capacity (doctor in the room) was also substantially greater than average demand and exceeded all weekly peaks except two during the six months graphed. Even the real activity level (doctor actually doing something) was greater than demand 16 out of 26 weeks. However, despite two infusions of resources in an attempt to eliminate the backlog, the waiting time remained at 16 weeks.

As the doctors and administrators looked into the issue in more detail, they discovered that there were 10 different doctors, each with his or her own waiting list. There were four different procedures and three different urgency classes. All told, there were 73 different booking categories, each with its own separate queue. When there weren't patients in a particular category, staff would scramble to find appropriate replacements, and often the slots went unfilled. These problems were compounded by frequent "no-shows." The waits were so long that patients often didn't show up for their appointments.

Eventually, the endoscopy service pooled its referrals. Now patients are booked with the next

FIGURE 1 Capacity, activity, and demand in the Birmingham Heartlands Hospital Endoscopy Suite



available doctor. General practitioners and other referring physicians can still ask for a specific endoscopist, but the patient then gets a later appointment than if the referral is simply made to the endoscopy service. Soon the average wait had been cut by 75%.

As this example illustrates, one problem with prioritization is that it creates many separate categories for patients to be booked. It's like a lineup at a bank. More people can be processed when one line feeds all the tellers. When there are separate lines for each teller, some lines move quickly, but others move slowly. Sometimes, one teller will be free when there are lines for the others. It may take a minute or more to alert the other lines and move someone over. And, frequently, it is a person in the back, not the front, of another line who moves over to the free teller, compromising fairness.

When delays for health services get long, the numbers of patients who don't show for their appointments rises. They might have had their care elsewhere, died, or simply forgotten. And when there are long waits for care, some patients deteriorate and may no longer be appropriate candidates for surgery. As staff scramble to find patients to fill an empty slots, they typically will call patients who live nearby and are mobile, not those who might have greater urgency. And when they don't fill the slot, the capacity is lost forever. For example, 10% of patients booked for ultrasound examinations at the QEII Hospital in Halifax in July 2005 did not show up for their appointments.[20]

Another problem with prioritization of some patients is that it can distract from solving the problem for everyone. For example, instead of prioritizing breast patients first for mammograms, then, if necessary, for ultrasound examinations, and finally, if necessary, for biopsies, it would make more sense to simply perform the follow-up tests the same day on the 10–15% of women who have positive mammograms. In fact, this is the growing trend with the establishment of breast clinics in many Canadian cities.

It is understandable that, when capacity appears to fall short of demand, prioritization appears to make sense. There is nothing wrong with prioritization, per se. But too often it leads to multiple queues and more so-called capacity/demand mismatches. The next section explains this problem further.

Backlog clearance is usually a temporary fix: If intermittent capacity/demand mismatches cause waiting lists, then they will re-appear after the backlog is temporarily cleared

People tend to assume that, if there is a wait for something, there isn't sufficient capacity. The above analysis indicates that frequently there is enough capacity, but it isn't being efficiently utilized.

Consider the situation of a delay to get into a hockey arena. There will be enough seats for everyone once they get inside. There's just a bottleneck at the doorway. A system bottleneck is the step in a process where flow is most restricted. Simply doubling the number of seats in the arena would only make the delays worse if the doorways weren't widened as well.

The waits in the arena are longer if all the fans come just before the game starts, and may be nonexistent if people arrive in a constant stream during the hour prior to game time. If the arena staff try to push the fans through the turnstiles at too high a rate of flow, they will get stuck, people will back into each other, and the line might grind to a halt.

In the health care system, overly high rates of utilization lead to flow problems, which are then typically addressed through temporary increases in capacity. Clearing patient backlogs is politically appealing, but it almost always fixes the problem only for a short period of time.

How operating room time is allocated can make waiting worse

There is no fixed method for allocating operating room (OR) time in Canada. Usually, individual surgical departments make this key public-policy decision. Sometimes it's democratic and transparent. Sometimes it's autocratic and opaque. In some departments, the time is shared equally and new operators are given referrals by other surgeons, who shorten their lists. But usually, OR time is allocated according to historical volumes or the stated length of a surgeon's wait lists. This is one of the main reasons why there is so much discrepancy between the lengths of different doctors' wait lists.

Saskatchewan health policy analyst Steven Lewis notes that this system penalizes honest doctors and rewards those who pump up their lists with questionable surgical candidates.[23] He recalls one surgeon who acquired half the OR time in one community by booking patients whose problems his colleagues didn't think merited surgery. Allocating OR time according to these methods also penalizes doctors who share patients with their colleagues.

Dr. Steyn notes that, in the UK, surgeons are paid on a salary system. However, the NHS pays them on a fee-for-service basis when there is an initiative to clear patient backlogs. According to Dr. Steyn, some surgeons can be paid over Cdn$200,000 annually to "clear their lists." If surgeons are paid so handsomely to have wait lists, then, he notes, they have much less incentive to cooperate with projects which reduce lists.

That's because, even when average capacity is greater than the average demand, intermittent temporary capacity/demand mismatches can lead to long waits. As with the Birmingham endoscopy example, many services actually have enough theoretical capacity to meet their demand, but temporary mismatches in supply and demand, over time, can create long lists.

If a particular service always has the capacity to treat 10 patients per day, and if there are always 10 patients who present for care, there will be no waiting list. On the other hand, if capacity and demand both average 10 but vary between nine and 11, sometimes only nine slots are available when 11 patients present, or vice versa. Surplus patients are added to the wait-list, but, when nine patients present and 11 slots are available, two slots are wasted. Unmet need continues forward as a waiting list, but unused capacity is wasted and lost forever. In this example, even though average capacity is equal to average demand, just two wasted slots per week would create a 100-person wait list in one year. A casual observer would conclude that the problem was inadequate capacity and that the solution was more resources. In the Halifax QEII example, a 10% no-show rate translates into approximately 1,400 lost ultrasound slots every year.

It is often assumed that demand varies more than capacity because illness is a capricious event. But, typically, capacity varies much more than demand. Hospitals usually only admit elective patients Sunday through Thursday. Doctors may only do ward rounds and discharge patients two or three days a week. Hospitals decrease elective services over Christmas and summer holidays, leading to major backlogs in January and September. Too frequently, different providers treat similar patients in a variable fashion; counter to published guidelines for care.[21, 22] As in the Birmingham endoscopy example, there are usually multiple queues for services by urgency rating and clinician.

The key analytic point is that, if a system creates a wait list because of frequent capacity/demand mismatches, then it will automatically recreate a list even after clearing a backlog. It may take a month or a year, depending upon the particulars, but the wait list will recur.

For-profit options are not solutions

It is important to clarify terminology because private but non-profit organizations already deliver most health care in Canada. In Ontario, almost all hospitals are private but non-profit. In most other provinces, hospitals are owned by regional health authorities, which are quasi-governmental bodies. But there are independent, private, non-profit hospitals as well, mainly affiliated with religious groups. Most doctors are in private practice, although more are becoming salaried employees. According to economists, doctors' offices are not the same as other small businesses because they are governed by professional norms as well as by the bottom line. University of British Columbia economist Robert Evans refers to doctors' practices as "not-only-for-profit" enterprises to distinguish them from for-profits and non-profits.[24]

Some claim that, as long as the public pays, it doesn't matter who delivers clinical service. Senator Michael Kirby's commission has recommended that governments put their clinical services up for bidding.[25] Even though this option is intuitively appealing and competitive bidding may lead to efficiencies in some other sectors, the evidence is clear that this policy does not work in health care.

McMaster University cardiologist Dr. P.J. Devereaux's group published a paper in the *Journal of the American Medical Association*, in November 2002, which examined the contracting-out of dialysis in the United States.[26] The U.S. dialysis system is a universal program. The U.S. Medicare program, which also provides coverage for people over 65, covers all Americans with kidney failure. Medicare doesn't cover other types of organ failure, e.g. heart, liver, unless the patients are over 65. The Medicare program decides which dialysis centres to fund by using a competitive bidding process. Roughly three-quarters of dialysis is conducted in for-profit facilities and one-quarter in non-profits.

Although the Medicare program had assumed that its RFP processes ensured due diligence, Devereaux and his colleagues found that patients attending for-profit dialysis clinics had 8% higher death rates than those who got their care at non-profits. For-profit clinics had fewer staff and less well-trained staff. They also dialyzed patients for less time and used lower doses of key medications. These results suggest that, in the U.S., there are 2,000 premature deaths every year among people on dialysis because their care is being provided by for-profit clinics.

Dr. P.J. Devereaux's group also published an overview of all the individual studies that had compared mortality rates for for-profit and non-profit hospitals.[27] The group found 15 studies that met their rigorous methodological requirements. Adults had 2% higher death rates in for-profit hospitals, while the newborn mortality rate was

10% higher. The investigators estimated that, if all Canadian hospitals were converted to for-profit status, there would be an additional 2,200 deaths per year — more than die every year from ovarian or stomach cancers.[28] The investigators found that for-profit hospitals tended to have fewer staff and less well-trained staff. These factors have been found to be associated with higher death rates in other studies of the quality of hospital care.[29]

It also appears that for-profit care tends to be more expensive than non-profit care. In June 2004, Dr. Devereaux's group published a study which concluded that American for-profit hospitals are 20% more expensive than non-profit facilities on a case-adjusted basis.[30] As Dr. Devereaux commented, "Private for-profit facilities typically have to generate 10-to-15% profits to satisfy shareholders. Not-for-profit facilities can spend that money on patient care."[31]

A study of U.S. Medicare costs found that health spending was higher and increasing faster in communities where all beds were for-profit than in communities where all beds were non-profit.[32] Spending grew fastest in those communities that converted all their beds to for-profit care during the study period. Spending fell the most in those communities that converted all their beds to non-profit care.

There are no Canadian studies similar to those conducted in the U.S. But, as the American literature shows, there are fundamental problems associated with effective contracting. These are discussed further in the next section.

There are systemic reasons why for-profit care tends to be more expensive and poorer quality

Competitive markets are often the most efficient way to allocate resources, but health care is far from being a traditional market. As UBC health economist Robert Evans notes, the frequent and serious asymmetry of information between providers and patients for most services means that it is impossible to establish a proper market.[33] That is why health care is necessarily characterized by so much regulation. The provinces don't just let anyone perform surgery. Even the advocates of a "free market approach" to health care don't recommend the elimination of professional licensure legislation or government drug regulation.

In a paper for the Romanow Commission, University of Toronto Professor of Health Policy Dr. Raisa Deber identified four barriers to effective contracting of health care services:[34]

- *Low contestability*: The economic realities of health care (large captial costs, scarcity of highly skilled workers) make it difficult for firms to easily enter the market. As a result, there would be little competition for clinical care in most parts of Canada. This market condition can also lead to "low-balling," whereby, after a government or health authority gives up its own surgical capacity, it is at the mercy of the contractor when the initial contract expires.
- *Cream skimming*: Given the opportunity, providers will choose easier-than-average patients when they will be paid at the average rate. For example, consider a regional authority which pays a not-for-admission (NFA) surgical clinic the overall average rate per case for knee replacement surgery. If the clinic does its surgery on healthier patients (e.g., middle-aged athletes) who require less care than complicated patients (e.g., elderly persons with serious co-existent illness such as heart disease) who continue to receive their surgery at the public hospital, then the public system will be overpaying the clinic for its services. As a result, fewer procedures will be performed and the wait list will grow longer.

- *High complexity*: Many health care services have multiple (and sometimes conflicting) goals, which are best attained when the service is included within an overall system of care. For example, long-term institutional care is a very complex service with multiple goals — maintenance of life, preservation of dignity, good medical care, stimulating recreation, etc. From time to time, these goals may seem opposed to each other. As Priofessor Deber notes, even a blood test, which in itself is a precise measurement, only attains value when it is embedded within an overall system that ensures that it is ordered on appropriate patients and interpreted correctly. A Request For Proposal cannot cover all the possible outcomes of interest from a complex service. In reality, the main focus tends to be price.

- *Low measurability*: It is often difficult to assess the quality of service. Partly this is due to complexity. How can one summarize the performance of a particular service with one grade, e.g., A or B, when some parts are performed well and others poorly? Some aspects of care may be difficult to quantify, e.g., the spirituality of obstetrical or palliative services. Finally, present information systems often do not allow for the proper costing of specific services, especially on a case-adjusted basis. When the public sector doesn't know the true costs for care, but the for-profit contractor does, how can the public ensure that it is getting a good deal?

Externalities pose another barrier to effective and fair contracting. Externalities are costs or benefits of production which are neither charged to nor accrue to the producer.[35] For example, for-profit health care contractors often don't pay benefits to their part-time staff because many of these professionals already receive benefits from their other jobs in the public sector.

Non-profit health services are much more likely than for-profits to expend resources on linking different organizations together to plan community networks,[36] engage their communities and enlist volunteers,[37] and to provide continuing education and training programs.[38]

When measurability is low and complexity is high, Professor Deber concludes that non-profit health or social service organizations are more likely to provide services beyond what is precisely specified in their contracts. American analyst Marc Bendick suggested that the public sector contract exclusively with appropriately governed non-profit organizations.[39] He said this would allow them (with suitable funding to match their mandate) to work out the specific program details with their intimate knowledge of their complex system.

Finally, fraud is a major problem in the U.S. for-profit health system. In 2000, American health care company HCA (formerly Columbia/HCA) was fined nearly US$1 billion for systematically defrauding the U.S. Medicare program.[40] Similarly, Olsten Corporation agreed in 1999 to pay US$60 million to settle a suit with the Medicare program.[41] The only comparable Canadian situation occurred in 2001 when Ron and Loren Koval were convicted of defrauding investors of Cdn$90 million to fund non-existent medical equipment for the for-profit King's Health Centre in Toronto.[42]

Even public sector organizations have to be concerned about rogue employees. But there is no remotely comparable example of this kind of fraud among Canada's non-profit health providers.

International experience with private care

The Canadian debate is peppered with positive comments about other countries' private systems. However, when these are examined more closely, it appears that privatizing finance or delivery does not reduce public sector waits.

The University of Toronto's Carolyn Tuohy and colleagues reviewed the evidence on private finance in OECD countries.[43] They concluded that in Britain those areas where more people had private insurance also had longer public sector wait lists. Overall, they conclude that, "Not only do parallel private systems not appear to reduce pressure on the public system, but they may also have the perverse effect of increasing the apparent inefficiency of the public sector."

The European region of the World Health Organization recently reviewed the evidence on private finance of health care.[44] The report concluded: "Evidence shows that private sources of health care funding are often regressive and present financial barriers to access. They contribute little to efforts to contain costs, and may actually encourage cost inflation."

Despite glowing reports of user fees in Sweden or private hospitals in Australia, it appears that these policies would actually reduce equity, lengthen public sector wait times, and substantially increase administrative overhead and overall costs. These findings stand to reason. Given that there is a finite pool of health professionals, where parallel public and private systems exist, the private system siphons doctors and nurses away from the public system, thereby lengthening waits in the public system. In fact, exactly this situation has just occurred in Winnipeg. The private Maples Surgical clinic purchased an MRI and hired one full-time and one part-time MRI technician away from the public Health Sciences Centre.[45] As a result, the Health Sciences Centre has had to eliminate 20 hours of service per week, which will lead to longer public sector queues.

Conclusion about private care

There are some health care goods and services for which markets do work. There is no need for Crown corporations to manufacture Band-aids. Many companies manufacture Band-aids. It's not difficult to get into this market. It's not hard to determine whether a Band-aid has met specifications. Cream skimming doesn't apply. However, the evidence on direct patient care is clear. Contracting out the surgery tends to cost more and, if anything, leads to poorer quality. Parallel private sytems allow those with resources to get faster care while the rest suffer longer waits.

What are the real solutions?

There are two related public sector solutions to health care queues:

1 implementing modern approaches to queue management, including re-design of services; and

2 developing non-profit, specialty, short-stay clinics.

As mentioned earlier, there are clearly other important issues in resolving wait lists. If Canadians were healthier, we wouldn't need as much health care. For example, there are approximately 4,000 fewer Canadian male lung cancer cases to treat this year than there would have been if as many men were still smoking today as they were 30 years ago.[46]

Modern approaches to queue management

Queueing theory is a branch of mathematics, which deals with waits and delays. Any time something or someone arrives from somewhere else, has something done to them, and then departs, queueing theory can be used to improve flow. Applications of queueing theory are ubiquitous for air traffic control, manufacturing processes, and many other aspects of day-to-day life, including inventory control in hospitals. But, ironically, there has been little use of queueing theory to reduce patient delays in the health care system.

This is not to suggest in any way that patients should be treated as inanimate objects on assembly lines. Of course patients must be treated as dignified, suffering individuals. These techniques are simply tools that can assist us in responding to patient concerns in a more timely fashion.

One example of new ways of approaching waits and delays in ambulatory care is referred to as "advanced access." Many family doctors often have waits of four weeks for appointments. The delay is typically shorter just before a doctor's vacation and longer just after, but overall it is fairly stable. In this situation, the doctor's capacity may well be close to meeting demand, but he or she is servicing last month's demand today while postponing today's work until next month. If doctors could clear their backlogs, then theoretically many could go to "just-in-time" servicing, sometimes referred to as "advanced access."

The Rexdale Community Health Centre serves 6,000 patients in a disadvantaged community in northwest Toronto with only 1.8 full-time equivalent family physicians. In 2003, patients faced a four-to six-week wait for appointments. The centre temporarily increased resources to clear its backlog, and then went to same-day service. To achieve advanced access, services had to be re-

designed as well. The Rexdale CHC enhanced the roles of two nurses, who previously spent a lot of their time telephone-triaging patients who were sent elsewhere for care. Now they spend much of their time dealing with patients with minor illnesses.

The Lawrence Heights Community Health Centre in Toronto and the Saskatoon Community Clinic have also implemented advanced access. The Saskatoon Community Clinic is now assisting the Saskatchewan Health Quality Council in an aggressive program to implement advanced access for 20% of the province's family doctors by 2006 and extend it to the entire province by 2010.[47]

This same analysis can be followed to reduce the delay for any health service, whether an ambulatory visit or a procedure:

1 Assess whether capacity is sufficient to meet demand.

2 If capacity is sufficient to meet demand, temporarily increase resources to clear the backlog and then go to just-in-time servicing.

3 If capacity appears insufficient for demand, then attempt to reduce demand and re-design services.

4 If after maximal re-design, there is still unmet demand, then a bottleneck has been identified. It requires more resources.

Assess whether capacity is sufficient to meet demand

Typically, services know their activity level (utilization), but may not know their capacity or demand just as in the Birmingham endoscopy case. For example, in primary health care settings, many patients phone the practice but can't be seen and go elsewhere and don't seek care at all. An examination of appointment books will only show who was seen, not who wasn't. The staff need to track all phone calls to measure demand.

Services frequently don't know their actual capacity, either. For example, University of Toronto engineering professor Dr. Michael Carter notes that one procedure room he studied booked patients every 30 minutes, even though the average procedure took 17 minutes.[48] The unit actually had about 50% more capacity than had been assumed.

Patient-centred care enhances capacity

Patients and their families provide most health care. They don't perform the surgery, but they often determine how long a patient stays in hospital, whether they need home care services, and whether they are re-admitted to hospital. Too often, surgery is cancelled at the last minute when someone has painstakingly planned a vacation to provide care to their parent in hospital and help them get home. Stanford nurse researcher Dr. Kate Lorig has developed and implemented patient self-management tools which allow patients with chronic illnesses to take charge of their care. Self-management can improve outcomes and reduce costs for arthritis, asthma, and possibly other conditions.[49]

Demand should be measured with regard to appropriateness

There is no point paying either publicly or privately for procedures that don't benefit patients. Although not much discussed in the media or in the general political debate, many health services actually harm patients. Dr. Charles Wright and colleagues at UBC evaluated the indications for and outcomes from six elective surgical procedures and reported the findings in 2002 in the Canadian Medical Association Journal.[50] Dr. Wright, a Vancouver surgeon, found that 94% of elective hip

replacement patients were better after surgery, 4% were unchanged in their symptoms, and 2% were worse. On the other hand, only 70% of cataract surgery patients were improved, while 26% actually had worse vision after the procedure. It appears that many of the cataract surgery patients would have been better off if they had not had their surgery.

Dr. Wright concluded: "The wide range of severity of symptoms and disability for which elective surgery was recommended raises questions about the appropriateness of some procedures."

If capacity is sufficient to meet demand, temporarily increase resources to clear the backlog and then go to just-in-time servicing

If *c*apacity is sufficient to meet demand, then theoretically the clinical service could provide seamless care. However, as we have discussed, temporary capacity demand mismatches can create long backlogs even if overall capacity is in excess of demand. As the staff are working down the backlog with temporary resources — e.g. Rexdale CHC hired locums to assist the doctors — they should be identifying these mismatches and reducing variation through smoothing capacity and shaping demand.

Smoothing capacity

Smoothing capacity literally means eliminating the peaks and troughs of capacity that plague health systems. Although it seems the fates are capricious in whom they strike down with illness, the overall demand for care is fairly stable. In fact, emergency admissions tend to have less variation than elective ones. In other words, the system creates more variation than does fate.

As mentioned earlier, doctors may only do ward rounds and discharge patients two or three days a week. A patient may be ready to go home on Wednesday morning, but has to wait until Thursday or Friday to be discharged by her doctor.

Variation can be reduced and patient flow improved by smoothing demand around the clock and the calendar. For example, typically all doctors in a hospital do their ward rounds in the morning and then write orders for patient discharge in the late morning or early afternoon. This puts pressure on the pharmacy for discharge medications, and on the porters to move the patients off the wards. Then, typically, doctors move to their offices for the afternoon and simultaneously attempt to admit their patients in the mid- to late afternoon. When doctors are persuaded to make their rounds at different times and admit patients throughout the day, flow is smoothed and delays can be avoided. Hospital beds can be freed up by ensuring hospital patients vacate their bed as soon as they are ready for discharge. This may be facilitated by making available discharge rooms where patients can be monitored for up to six hours while waiting for family to pick them up.

Up until 2002, the Piedmont Hospital in Atlanta faced constant overcrowding, with frequent ER diversions. The hospital had a traditional bed booking system, with several cumbersome steps involving phone calls and faxes. In the new system, the hospital invested in electronic systems that provides real-time information on its bed status. They put the information on a special Internet site and on electronic signs in the doctors' parking lot. This information allowed doctors to send patients when they wouldn't have to wait and hold patients back for a few hours if there were no available beds. The information system allowed doctors to even the flow of patients into the hospital.[51]

The results of this simple intervention were spectacular. Within three years, ER diversions decreased by 60%, while there was a 3% increase in patients treated. Now over 90% of patients are as-

Pooling patients: faster care

One of the key tactics mentioned to improve flow is to pool referrals into a common wait list. In the Birmingham endoscopy example, pooling patients reduced waits by 75%. Sometimes pooling is interpreted as having to see a different doctor on every visit. But once the patient sees a surgeon for an ambulatory visit, he or she could just continue to provide the rest of the care, including surgery if needed. This would avoid discontinuity of care and disruption of the doctor-patient relationship.

Some people are concerned that they might be prevented from seeing the doctor of their choice, who might not be the next doctor on the list. But, in the Birmingham endoscopy example, patients or family doctors who wanted certain specialists could be accommodated while still maintaining the smoother flow associated with central referrals.

In reality, very few patients have a preference for one specialist over another. Even family doctors tend to have little knowledge about the performance of specialists. In the average family doctor's practice, only one or two patients per year will receive artificial joints, and only one patient in a year or two get heart surgery. In Canada, there is little public performance information to guide patients or family doctors.

Some people worry about not getting care from the very best doctor. With the paucity of formal information available, patients naturally rely on family doctors or "generalist" specialists like internists or pediatricians to recommend sub-specialists and surgeons. However, even these assessments might not be valid. An American study concluded that other doctors considered heart surgeons who trained in certain prestigious schools as the "best doctors," even though they did not have lower mortality rates.[53] In the absence of hard data, it is very difficult even for doctors to know who the better doctors really are.

Furthermore, there are numerous existing examples of pooling of referrals. In most teaching hospitals, emergency admissions are taken by the team assigned to take them that day. This team usually provides care for the duration of the admission. Increasingly, in community hospitals, patients are being managed by hospitalists — family doctors or specialists in internal medicine or pediatrics who take patients on a rotation as they come into hospitals. American studies show that the implementation of hospitalist services is associated with decreased costs and improved outcomes.[54, 55]

A number of surgical group practices operate on the basis that the next doctor takes the next patient. The most common example of pooling is anesthesiology practice in most hospitals. Patients and family doctors rarely think of the anesthesiologist when considering surgery. But, for many patients and for many procedures, that doctor might have as much influence over the overall success of the operation as the surgeon.

signed a bed within one hour of the request being made, compared with less than 20% in 2001.

In a similar fashion, because winter typically leads to more emergency medical admissions (more cardio/respiratory disease), hospitals could smooth their patient flow by re-scheduling more elective surgery for the spring and summer and encouraging surgeons and operating room staff to take their vacations in the winter.

Different doctors treat similar patients differently, disrupting or preventing staff from developing efficient pathways. There may be variation in equipment or procedure rooms. It is much more efficient to do the same kind of surgery in the same room every day. Changing the operating room between cases for different kinds of procedures causes delays. Information back-ups delay flow. Systems like the Veterans' Administration health system, which have fully relational

electronic databases, ensure information is immediately available to clinicians as soon as it is available.

As in the Birmingham endoscopy example, our current health care system often creates multiple queues for services by urgency rating and clinician. One key tactic to reduce variation is to reduce the number of queues for services. Patients want one-stop shopping. The Women's Hospital in Birmingham, England, decreased the wait from family doctor referral to definitive treatment of ovarian cancer by 85% when it began referring patients to the gynecologist with the first available slot.[52] The hospital didn't recruit other gynecologists who weren't performing ovarian cancer surgery to take on these patients. The patients still saw only the five gynecologists who specialized in this kind of surgery.

Reducing Demand

Demand can be reduced by servicing it more appropriately. Many Canadians face long waits for specialist visits. In most of Canada, specialists book their referrals for one-hour appointments. But sometimes the visit can be obviated by a five-minute phone call between the family doctor and the specialist. In other cases, the patient and family might need a half-day assessment from a multidisciplinary specialist team.

In Hamilton, the creation of mental health teams of counsellors, family doctors, and psychiatrists decreased referrals to the regional psychiatry clinic by 70%,[56] while increasing the numbers of patients treated for mental-health problems by 900%.

If capacity appears insufficient for demand, then attempt to reduce demand and re-design services

If capacity at first appears to be insufficient to meet demand, then, as above, temporary capacity/demand mismatches should be identified and variation reduced through smoothing of capacity and the reduction of demand. But it is more important to focus on service re-design when capacity appears to be consistently greater than demand. For example, Dr. Russell Goldman, a family physician with Toronto's Mount Sinai Hospital's palliative care service, struggled to manage a caseload of 60 patients when each had a different home care nurse. But when he was teamed with just two nurses, he was able to increase his caseload to 100 and felt his workload was less than when he had only 60 patients.

If capacity is still insufficient to meet demand despite maximum demand reduction and service re-design

If capacity is still insufficient, a bottleneck has been identified. The bottleneck should be carefully examined to identify the resource constraint. Is the prime constraint capital, human resources, or other operating resources? New resources should then be added to eliminate the bottleneck.

Multi-step health care

Most health care episodes involve several steps. For example, arthritis patients usually start off being treated by their family doctors. Eventually, if their joint pain increases or there are other signs of failure to respond to therapy, the family doctor will refer the patient to a rheumatologist or an orthopedic surgeon. After the initial specialist visit, the patient will usually be sent for an imaging study (e.g., X-ray, MRI) and then often is referred to a physiotherapist. At some point in follow-up, if the patient is still deteriorating, an orthopedic surgeon will put the patient on his or her surgical list. At each step in the process, the patient may face delays of months. It is these kinds of multi-step services which are particularly plagued with delays.

When dealing with long waits for several linked services, the first step is to map the whole course of care and eyeball the data. Sometimes this process will immediately suggest re-design possibilities. When the staff responsible for Edmonton's diabetic education centres at Capital Health Authority mapped their process, they saw that every patient was required to see a diabetologist, a medical specialist in diabetes, on the first visit to the centre. They realized that this didn't make sense because, while almost all patients needed to see a nurse and dietitian, very few needed to see a diabetologist as a condition of access to the rest of the program. That contact could come when it was appropriate. When they eliminated this step, average waits fell from 4–8 months to two weeks.

Given the concerns about hips and knees, the public sector could create orthopedics clinics where patients could be seen within two weeks by family doctors or nurse practitioners. At this visit, the patient could be assessed, appropriate diagnostic imaging studies ordered, and referrals made to physiotherapy, dietetics, social work, and/or other services. The patient could then see an orthopedic surgeon if/when it was necessary in a more timely fashion.

As much as possible, different steps in the diagnosis and treatment pathway should be consolidated, as with breast health centres. Tommy Douglas recommended exactly this approach to remedy care delays 25 years ago:

"I have a good doctor and we're good friends. And we both laugh when we look at the system. He sends me off to see somebody to get some tests at the other end of town. I go over there and then come back, and they send the reports to him and he looks at them and sends me off some place else for some tests and they come back. Then he says that I had better see a specialist. And before I'm finished I've spent within a month, six days going to six different people and another six days going to have six different kinds of tests, all of which I could have had in a single clinic."

There will always be a bottleneck somewhere

Once the process of care is re-mapped, the four-step analysis should be conducted at each stage. Over time, the bottleneck in the process may move around. There will always be one stage which will move slower than the others, but the goal is to even the flow by reducing variation as much as possible and plan the bottleneck for where it can be most effectively controlled.

Developing non-profit, specialty, short-stay clinics: Public sector solutions from Winnipeg and Toronto

Lessons from Pan-Am and Trillium Queensway

The Pan-Am and Trillium Queensway Clinics show that we can combine the advantages of stand-alone surgical facilities with the benefits of non-profit operation. We can learn several lessons from these two examples which are described in the next two pages:

1 Administrative savings

2 Innovation for flow

3 Broader benefits to society

4 Providers tend to know their costs better than payers

5 These models can solve many other queueing problems

Administrative savings

There are significant administrative savings with the use of the public sector to provide day surgery and other low-risk elective surgeries. The Queensway Surgicentre does not need its own Human Resources department. It does not need its own IT department or CEO, either. All of these functions are subsumed within the administration of Trillium Health Centre. The main "back office" functions for the Pan-Am clinic are carried out by the Winnipeg Regional Health Authority.

Innovation for flow

Stand-alone dedicated clinics, like Pan-Am and Queensway, deal with homogeneous, low-risk patients, which decreases the variation in demand, allows for better flow, and increases efficiency.

On an assembly line, if vehicles sometimes arrive a metre above a worker's head and sometimes below his waist, that worker has to expend time and effort moving up and down. This variation can slow down the line. And if the worker can't cope with the variation, the line might stop dead. In health care, if the operating room team is dealing with several different kinds of patients, it will have more flow problems than if it is only doing one type of operation on fairly homogeneous patients.

At Trillium, flow has been designed from the patient's viewpoint. Cataract patients attend a pre-surgery clinic, where an anesthetist ensures that they are indeed low risk. When they come back for their procedures, they first meet a nurse in a private counselling room to ensure they are properly prepared. Then they move to the operating room, with the procedure taking about 15 minutes. Finally, they move to the post-op area. After they are cleared to leave this area, the same

The Pan-Am Clinic, Winnipeg

The Pan-Am Clinic was established in 1979. In 1984, it moved to its present location beside the Pan-Am swimming pool, which hosted the water sports for both the 1967 and 1999 Pan-American Games.

The clinic developed as a for-profit company with a mix of private and public funding. In 1999, the province of Manitoba agreed to cover all the surgical costs at the clinic. In 2001, the Gary Doer government negotiated a buyout of the clinic from its owner, Dr. Wayne Hildahl. It now operates as a not-for-profit clinic. Dr. Hildahl continues as the chief operating officer reporting directly to the CEO of the Winnipeg Regional Health Authority (WRHA), Dr. Brian Postl.

The clinic occupies approximately 20,000 square feet of space, and 20,000 more will be added when the current renovations are completed. Present services include a sports medicine clinic, a physiotherapy facility, a satellite WRHA pain clinic, a minor injury clinic which opened in December 2004, diagnostic imaging, and not-for-admission (NFA) surgery. The clinic performs 5,250 orthopedic procedures annually and has the capacity for another 700. It currently performs 500 cataract operations and will take on another 300 in 2005. The WRHA is moving in as much plastic surgery as it can to Pan-Am from the tertiary care Health Sciences Centre.

The clinic is currently considering so-called "23-hour" care. This would mean that the clinic could provide one-night stays for some low-risk patients such as those requiring hip replacements. Dr. Hildahl says that he wants to challenge the conventions of what services can be provided in a non-hospital environment. Eventually, he hopes the clinic will take low-risk patients for two or three night stays if the service can be provided in a safe and efficient manner. The Pan-Am Clinic may now be part of the public system, but Dr. Hildahl has not reduced his vision for innovation.

The Pan-Am Clinic charges less than private facilities. There has been no formal evaluation of the clinic, but, when the WRHA took over its operation, the payment for cataract surgery fell from $1,000 to $700. Dr. Hildahl claims that he runs the clinic with an eye to the bottom line, just as when he owned the facility. He tries to use his resources as efficiently as possible so that he can treat more patients. He notes that the main difference now is that all surpluses have to go towards patient care. "Before the buy-out, I could have taken the money and gone on vacation. Now the surpluses are used to treat more patients."

Consistent with the literature, the Pan-Am Clinic creates benefits for the rest of the health system. The Clinic hosts training for medical students, residents in plastic surgery, anesthesia, orthopedics, pediatrics, and family practice, as well as students in nursing, physiotherapy, and athletic therapy. Dr. Hildahl is currently in discussion with a Winnipeg high school to have Aboriginal students spend time at the clinic to encourage them to consider health care careers.

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nurse who met them at the beginning takes them to the recovery area, lined with recliner chairs. When they are well enough, the nurse clears them to go and then calls them the next morning to make sure they're recovering on schedule. Every step in the process is carefully planned around the patients and their needs, to ensure efficient flow. Patients had input into the design, ensuring fully private assessment rooms and real plants beside the recliners.

Many associate innovation with the private, not the public sector. However, these examples demonstrate that innovation is alive and well in the public sector. Both these clinics have pioneered a number of new services. Kim Stephens-Woods, director of the surgical health system for Trillium, says they are continually trying to

The Trillium Health Centre, Toronto

The Trillium Health Centre was created from a 1998 merger of the Queensway General Hospital in the Toronto suburb of Etobicoke and the Mississauga Hospital 5 kilometres farther west in the city of Mississauga.

The Queensway site was renovated as a not-for-profit day surgery centre. Its 23-acre site includes an urgent care centre open from 8 a.m. until 10:00 p.m., a cardiac rehabilitation centre, a diabetes education centre, and, as of October 2001, North America's largest free-standing day-surgery facility. The Surgicentre houses eight operating rooms in its 23,000 square feet. The Surgicentre performs nearly 20,000 procedures per year, including 3,500 cataract surgeries. Other common procedures include cystoscopy (examination of the bladder), and breast, orthopedic, and gall-bladder surgery. The facility has the capacity to perform 30,000 surgical day procedures annually.

The Queensway has also been involved with the teaching of learners from a wide variety of disciplines, including: medicine, plastic and general surgery, nursing, registered practical nursing, respiratory therapy, physiotherapy, and occupational therapy.

Trillium has reduced costs by moving services to the Queensway ambulatory site. An internal evaluation demonstrated that day surgery costs were 10% lower at Queensway than at the Mississauga site, even though the Queensway patients required a slightly higher acuity of care.[57] Like the WRHA, the Trillium Health Centre is taking advantage of its integrated structure to move day surgery patients and the needed staff from its higher-cost in-patient hospital to its ambulatory care facility. Trillium is also considering 23-hour care for the Queensway site.

"think outside of the box" to provide the best care at the best price.

Broader Benefits to Society

As the literature indicates, non-profit services provide many positive externalities for their communities. The Pan-Am and Queensway facilities provide significant education opportunities for a variety of health sciences students. They also provide resources to community planning activities. Pan-Am is involved in encouraging Aboriginal students to enter health care careers.

Providers tend to know their costs better than payers do

Another lesson from these two clinics is that clinical units typically know their costs for patients much better than any payer. Dr. Hildahl notes that he has excellent costing data on the Pan-Am Clinic's patients, but that the Winnipeg Regional Health Authority does not. This point is now moot because the Pan-Am Clinic is an operating unit of the WRHA. However, in other jurisdictions, it is likely that health authorities will have to make their contracting decisions without fully knowing their current costs. This is a significant problem if health authorities are contracting with private providers.

These models can solve many other queueing problems

The Pan-Am Clinic and the Queensway Health Centre include a variety of other services besides surgery. Pan-Am opened its minor injury clinic in December 2004, and it is now seeing over 150 patients a day. These patients also require similar kinds of services, making it efficient to group them together. The clinic has the capacity to perform same-day surgery on the few patients who will require it.

These models have the capacity to remedy a lot of our queueing problems. As we noted earlier, there are particular problems with waits for orthopedic surgery. Some of this surgery needs to be performed in full-service general hospitals. But many operations, such as hip and knee replacements for persons who are otherwise healthy, could be performed in public short-stay clinics. These patients are low-risk and they tend to be fairly homogeneous. Clinics like Pan-Am and Queensway are tailor-made to facilitate the flow of these patients.

These kinds of clinics could be developed by regional health authorities. They could be part of the role re-design for some hospitals. Just as the Queensway Hospital converted itself from a medium-sized general hospital to a dynamic day surgery facility, other hospitals could be transformed to meet the needs of their communities.

As this paper demonstrates, capacity is often sufficient to meet demand when new techniques of queue management are used. One of the key tactics is to better use capacity by moving low-risk patients to public short-stay surgical clinics. These patients would flow very smoothly through a dedicated facility. They should be separated from the more heterogeneous higher-risk patients. Short-stay units can run smoothly at over 95% capacity, while general hospitals swiftly develop problems when occupancy rises above 85-to-90%.

Conclusions

The task of reducing health-care queues is not overwhelming. Long queues are usually not due to lack of system capacity and typically can be eliminated without substantial new resources. The Modernization Agency and its successor agencies have dramatically enhanced access throughout Britain's National Health Service by using modern methods of queue management. As a result, over one-half of family practices offer same-day appointments, and more than 90% of emergency departments discharge their patients within four hours of arrival 98% of the time.[58] The U.S. Veterans' Administration health service, an entirely public system, provides arguably the world's best health care to more than eight million mainly disadvantaged Americans. VA patients typically don't wait for care, either.[59, 60, 61]

The enemies of Medicare have used the legitimate public concern about health care queues to peddle ill-advised policies such as contracting out surgery to the for-profit sector and the establishment of parallel private systems. Advocates for privatization may claim that private clinics will deliver faster care at a better price, but the peer-reviewed literature demonstrates that for-profit care tends to cost more while, if anything, providing inferior quality. Even Alberta Premier Ralph Klein admitted in a candid moment that sending patients to private clinics in his province will cost more than if the services were provided in the public sector.[62]

Private clinics can appear to be more efficient because they typically specialize in just a few procedures for a relatively homogeneous group of patients. As a result of the low variation, patient flow is rapid, reliable, and efficient. Such clinics can operate at almost full capacity without developing stoppages to flow. However, the private sector has no monopoly on the model. In fact, the largest out-of-hospital surgical centres in the country are Winnipeg's Pan-Am Clinic and Toronto's Trillium Health Centre's Queensway Surgicentre, both public sector facilities.

In the U.S., the growth of for-profit health delivery has increased concerns about costs and quality. There are many examples of outright fraud. The U.S. health system spends huge sums on administration compared with Canada. Even with all this expenditure, it took a thorough overview by Canadian researchers to demonstrate that dialysis outcomes were significantly worse in the for-profit sector. It is the height of hubris for Canadians to think that we will somehow do a better job contracting out than our American cousins when we have little history in the area and virtually no resources devoted to oversight and regulation.

As this paper has illustrated, there are proven public sector solutions, and these solutions

are particularly effective if used in combination. If governments permit certain private options, we may preclude public sector solutions. This is particularly the case when human resources are scarce, as in the Winnipeg example of the shortage of MRI technicians. It appears Winnipeggers with $695 to spend will have better access to MRIs, while those who don't will have poorer access.

Let's not add private problems to our health care system. We already have the public solutions at hand. Let's start implementing them.

Notes

1 D Smith, Market-based reforms are the only real health guarantee, Calgary Herald, May 3, 2003.

2 RJ Romanow. Building on Values: The Future of Health Care in Canada. Final Report. Commission on the Future of Health Care in Canada. November 20002, page 138.

3 RJ Blendon, C Schoen, C DesRoches, et al., Common concerns amid diverse systems: health care experiences in five countries, Health Affairs, 2003;22:106–121.

4 Ontario Ministry of Health and Long Term Care. Found at: http://www.health.gov.on.ca/transformation/wait_times/wait_mn.html# accessed 051205.

5 A Skelly, Long knee replacement waits permanently lower function, Medical Post, February 18, 2003

6 Simunovic M, Gagliardi A, McCready D, et al. A snapshot of waiting times for cancer surgery provided by surgeons affiliated with regional cancer centres in Ontario. Canadian Medical. Association Journal. 2001;165:421–425.

7 R Sainsbury, C Johnston, B Howard, Effect on survival of delays in referral of patients with breast-cancer symptoms: a retrospective analysis, Lancet, 1999;353:1132–1135

8 O Vujovic, F Perera, AR Dar, Does delay in breast irradiation following conservative breast surgery in node-negative breast cancer patients have an impact on risk of recurrence? International Journal of Radiation Oncology, Biology, Physics, 1998;40:869–874.

9 MA Richards, AM Westcombe, SB Love, et al., Influence of delay on survival in patients with breast cancer: a systematic review, Lancet, 1999;353:1119–1126.

10 HC Sox. Benefit and harm associated with screening for breast cancer. New England Journal of Medicine. 1998;338:1145–1146.

11 F Meyer, Y Fradet. Screening for Prostate Cancer. In: Prostate Cancer: Balancing the Risks in Diagnosis and Treatment. Ed: NA Iscoe and MAS Jewett. Canadian Medical Association. Ottawa. 1999.

12 WM Flanagan, CL petit, J-M Bethelot, et al. Potential impact of population-based colorectal cancer screening in Canada. Chronic Diseases in Canada. 2003;24:81–101.

13 P Dey, N Bundred, A Gibbs, et al. Costs and benefits of a one-stop clinic compared with a dedicated breast clinic: randomized controlled trial. British Medical Journal. 2002;324:1–5.

14 Fayerman P. Surgery waiting list 'inflated'. Vancouver Sun. January 12, 2005. The BC wait lists were found, among other things, to include a few women who waited months for c-sections!

15 C Sanmartin, SED Shortt, ML Barer, et al., Waiting for medical services in Canada: lots of heat, little light, Canadian Medical Association Journal, 2000;162:1305–1310.

16 Esmail N, Walker M. Waiting Your Turn: Hospital Waiting Lists in Canada. 15th Edition. Fraser Institute. Vancouver. 2005. Found at: http://www.fraserinstitute.ca/shared/readmore.asp?sNav=pb&id=801. Accessed. 051206.

17 RJ Smith. Memo to staff January 24, 2005. Obtained at CBC website: http://www.cbc.ca/bc/news/050124_CEOhealthletter.html. Accessed March 24, 2005

18 Cardiac Care Network of Ontario website: http://ccn.on.ca/index.cfm?fuseaction=ts&tm=17&ts=126&tsb=0, Accessed December 6, 2005

19 BC Ministry of Health Services Surgical Wait Times website: http://www.healthservices.gov.bc.ca/waitlist/cardiac.html, Accessed December 6, 2005.

20 Nova Scotia wait times website: http://www.gov.ns.ca/health/waittimes/What_You-Can_Do_to_Improve_Wait_Times.pdf. Accessed December 6, 2005.

21 Hayward RSA, Guyatt GH, Moore K-A, et al. Canadian Physicians' attitudes about and preferences regarding clinical practice guidelines. Canadian Medical Association Journal. 1997;156:1715–1723.

22 Hutchison B, Woodward CA, Norman GR, et al. provision of preventive care to unannounced standardized patients. Canadian Medical Association Journal. 1998;158:185-193.

23 Lewis S. Personal communication. September 26, 2003.

24 RG Evans, Strained Mercy: The Economics of Canadian Health Care (Toronto: Butterworths, 1984).

25 Standing Senate Committee on Social Affairs, Science and Technology (Chair Hon Michael JL Kirby). The Health of Canadians — The Federal Role, Volume Six: Recommendations for Reform. October 2002. Ottawa.

26 PJ Devereaux, HJ Schunemann, N Ravindran et al., Comparison of mortality between private for-profit and private not-for-profit hemodialysis centers: a systematic review and meta analysis, Journal of the American Medical Association, 2002;288:2449–2457.

27 PJ Devereaux, PTL Choi, C Lacchetti, et al., A systematic review and meta-analysis of studies comparing mortality rates of private for-profit and private not-for-profit hospitals, Canadian Medical Association Journal, 2002;166:1399–1406.

28 Canadian Cancer Society. Cancer Statistics 2004. From: http://www.cancer.ca/vgn/images/portal/cit_86751114/14/33/195986411niw_stats2004_en.pdf. Accessed February 14, 2005.

29 LH Aiken, SP Clarke, DM Sloane, et al. Hospital nurse staffing and patient mortality, nurse burnout, and job dissatisfaction, Journal of the American Medical Association, 2002;288;1987–1993.

30 Devereaux PJ, Ansdell-Heels D, Lacchetti C, et al. Payments for care at private for-profit and private not-for-profit hospitals: a systematic review and meta-analysis. Canadian Medical Association Journal 2004;170:1817–1824.

31 McMaster University Department of Clinical Epidemiology and Biostatistics press release. November 19, 2002.

32 EM Silverman, J Skinner, E Fisher, The association between for-profit hospital ownership and increased Medicare spending, New England Journal of Medicine, 1999;341:420–426.

33 Evans, ibid.

34 R Deber, Health care services: public, not-for-profit, or private? Discussion paper #17, Royal Commission on the Future of Health Care, August 2002, http://www.hc-sc.gc. ca/english/pdf/romanow/pdfs/17 Deber_E.pdf (accessed November 4, 2002).

35 Evans, ibid.

36 J Banaszak-Holl, S Allen, V Mor, et al., Organizational characteristics associated with agency position in community care networks, Journal of Health & Social Behavior, 1998;39(4):368–385.

37 N Wolff, BA Weisbrod, EJ Bird, The supply of volunteer labor: the case of hospitals, Nonprofit Management and Leadership, 1993:4(1):23–45.

38 MM Rachlis, The hidden costs of privatization: an international comparison of community and continuing care, in Without foundation: how medicare is undermined by gaps and privatization in community and continuing care, ed. M Cohen, N Pollak (Vancouver: Canadian Centre for Policy Alternatives, 2000).

39 M Bendick jr. Privatizing the delivery of social welfare services: an ideal to be taken seriously. In: Privatization and the Welfare State. Edited by SB Kamerman and AJ Kahn. Princeton University Press. Princeton, New jersey. 1989.

40 F Charatan. US settles biggest ever healthcare fraud case. British Medical Journal. 2001;322:10.

41 Olsten settles fraud case. Found at CNN website:http://money.cnn.com/1999/07/19/companies/healthcare/ accessed February 27, 2005.

42 Ontario fugitives plead guilty in health centre fraud. Found at CBC website: http://www.cbc.ca/story/news/?/news/2001/03/27/kovals_pleado10327 accessed February 27, 2005

43 Tuohy CH, Flood CM, Stabile M. How does private finance affect public health care systems? Marshaling evidence from OECD nations. Journal of Health Politics, Policy and Law. 2004;29(3):359–396.

44 WHO Regional Office for Europe Health Evidence Network. What are the equity, efficiency, and cost-containment and choice implications of private health-care funding in western Europe? WHO Europe. July 2004. Found at: http://www.euro.who.int/document/e83334.pdf. Accessed December 9, 2005.

45 Robson M. Clinic 'poaching' staff: Sale: HSC clinic scaling back MRI program after techs hired away. Winnipeg Free Press. November 25, 2005.

46 According to Canadian Cancer Statistics 2004 published by the Canadian Cancer Society, the incidence rate for male lung cancer peaked at 96.4 per 100,000 in 1986 and was forecast to be 71.9 per 100,000 in 2004. Canadian male population estimated to be 16 million.

47 Chan B. Personal Communication. November 28, 2005.

48 Carter M. Evidence for Improvement vs. Evidence for Judgment: Choosing the Appropriate Tools for the Task. Sixth International Conference on the Scientific Basis of Health Services. Montreal. September 20, 2005.

49 T Bodenheimer, K Lorig, H Holman, et al., Patient self-management of chronic disease in primary care, Journal of the American Medical Association, 2002;288:2469–2475.

50 Wright CJ, Wright G, Chambers K, et al., Evaluation of indications for and outcomes of elective

surgery, Canadian Medical Association Journal, 2002;167:461–466.

51 LS Hamby, S Fraser. Use of patient waiting-time data to improve the hospital bed assignment process. Joint Commission Journal on quality and Safety. 2004;30(1):42–46.

52 RS Steyn. Information Management & Wait Times. A presentation to: Connecting the Dots: Managing Information Better to Improve Access to Cancer Care, a conference sponsored by Cancer Care Ontario. November 21, 2004. Toronto.

53 Hartz AJ, Kuhn EM, Pulido J. Prestige of training programs and experience of bypass surgeons as factors in adjusted patient mortality rates. Medical Care. 1999;37:93–103.

54 Auerbach AD, Wachter RM, Katz P, et al. Implementation of a voluntary hospitalist service at a community teaching hospital: Improved clinical efficiency and patient outcomes. Annals of Internal Medicine. 2002;137:859–865.

55 Tenner PA, Dibrell H, Taylor RP. Improved survival with hospitalists in a pediatric intensive care unity. Critical Care Medicine. 2003;31:847–852.

56 N Kates, A-M Crustolo, S Farrar, et al., Mental health and nutrition: integrating specialists' services into primary care, Canadian Family Physician, 2002;48:1898–1903.

57 K White, Trillium Health Centre. Personal communication. January, 2005.

58 RS Steyn. Personal Communication September 17, 2005.

59 AK Jha, JB Perlin, K Kizer, et al., Effect of the transformation of the Veterans Affairs health care system on the quality of care, New England Journal of Medicine, 2003;348:2218–2227

60 CM Ashton, J Souchek, NJ Petersen, et al., Hospital use and survival among Veterans Affairs beneficiaries. New England Journal of Medicine. 2003;349:1637–1646.

61 S Jencks, The right care, New England Journal of Medicine, 2003;348:2251–2252.

62 R Klein. Speech to Canadian Club. Calgary. Video. January 11, 2005