

Private Management of a Public Service: What Can Be Learned from the CROS Experience?

Thomas McGowan

In January 2001, Canadian Radiation Oncology Services (CROS) was awarded the first-ever contract for the private management of a publicly funded department of radiation oncology. Its goal was to help stop the referral of cancer patients from Ontario to the United States. Since April 1999, the Ministry of Health and Long-Term Care (MOHLTC) had been spending close to \$375,000 every week to send 20 patients per week to the United States for radiation (for a total cost of \$30 million). Immediately after CROS opened, breast cancer referrals stopped, and within three months, out-of-country referrals stopped completely. CROS saw its first patient in February 2001, and will see its last patient in August 2003. As of June 30, 2003, CROS has seen 2,018 patients, saving \$30 million when compared to out-of-country referral.

The success of CROS raises a number of questions, three of which are:

1. Why did CROS succeed when the existing centres couldn't increase capacity?
2. Are there any factors in the success of CROS that can be transferred to the publicly managed system?
3. How receptive is the system to the approach of private contracts for core clinical services?

There are clearly lessons in interprofessional relationships and work organization that can be transferred. It is not clear if the lessons regarding the contractual relationship between CROS and Cancer Care Ontario (CCO), and how these contributed to success, are transferable. Despite success in helping improve access to publicly funded radiation treatment in Ontario, CROS remained controversial. Time will tell whether CROS was a temporary, stopgap measure for a basically well-functioning system or not, but the resistance to considering that it may have been something more significant suggests that change will come slowly and with difficulty to Ontario.

SUCCESS, AND THEN FAILURE, OF OUT-OF-COUNTRY REFERRAL IN IMPROVING ACCESS TO RADIATION TREATMENT

Waiting times for radiation treatment for cancer have been a problem for at least 15 years. In 1998, the problem developed into a crisis. A wait of three months for radiation was common, and it was predicted that without drastic action the wait could double. By the end of 1998, radiation oncologists in Toronto were calling for the referral of patients to the United States for radiation treatment. The issue became highly politicized to the point where in the 1999 Ontario provincial election, both the Liberals and Progressive Conservatives promised that cancer patients would not wait longer than four weeks for treatment

(this is the waiting time target of the Canadian Association of Radiation Oncologists).

In early 1999, the provincial government agreed to fund treatment, travel, food and accommodation costs for breast and prostate cancer patients who travelled out of the Greater Toronto Area for radiation. That this was much more generous than the northern travel grant program (to fund travel from northern to southern Ontario) would eventually cause political problems. Almost immediately, close to 20 patients per week were travelling to the United States, and five per week to Thunder Bay, Ontario for radiation treatment. By the summer of 2000 it became clear that the short-term solution had become a long-term solution.

After 18 months of running the “re-referral program,” its shortcomings became more pressing. With increasing frequency, there were news reports on the inhumanity of forcing people to travel for cancer treatment just when they needed most to be close to home. The inequities between the re-referral travel grant and the northern travel grant continued to cause friction.

CCO and the government of Ontario might have been able to withstand the political cost of paying for cancer services outside of Ontario if this program had solved the access problem. However, a flaw in the design of the re-referral program meant that some patients who declined to travel were still enduring unacceptable waits for radiation treatment. The flaw was that one issue was never really settled: Who was responsible for patients who were eligible for, but declined, re-referral? In the summer of 2000, a small political battle was waged in Toronto between CCO and the local departments of radiation oncology over who was responsible for these patients. Was it the physician who originally referred the patient? Was it the cancer centre to which the patient was initially referred? Or was it CCO? The end result was that in September 2000, a small number of breast cancer patients who declined to be referred out of country were found to be waiting for radiation for up to seven months after surgery. The publication of this caused a brief media controversy, with then – Minister of Health Elizabeth Witmer calling for an investigation into how this could happen. Out-of-country referral was no longer an acceptable option.

FAILURE TO INCREASE ONTARIO’S CAPACITY PRIOR TO AND DURING THE PERIOD OF RE-REFERRAL

While ending re-referral was the precipitating event, it was the system’s long-term inability to meet the demand for radiation that was the real problem in Ontario. Solutions to capacity shortages had always been developed within the constraints of the current organizational structure. The questions had always been:

1. How can we expand the capacity of the current radiation departments?
2. How fast can we introduce new centres, and hence new departments?

The Politics

An article in the *Wall Street Journal* in May 2001 began like this: “Tom McGowan arrived at work one day this spring to find a sign posted on his office door. ‘Radiation Mercenary,’ it said.” This reaction underscored the depth of resistance encountered by CROS. Criticism was levelled at Cancer Care Ontario for entering into a contract. Numerous stories and columns appeared in the *Toronto Star*, including one by Thomas Walkom, who questioned why CCO couldn’t figure out how to run an extra shift. There were questions as to why an RFP wasn’t issued. My previous role as Executive Vice-President at CCO was cited as a reason why CROS should not have been awarded the contract. There were charges that profits were being diverted from front-line clinical staff. The Ontario provincial health critic called for the provincial auditor to do a value-for-money audit of the decision to contract out. All the while, CROS was maintaining capacity, eliminating the need for out-of-country re-referral, and providing necessary care that had not previously been present. However, when pressure began to mount, CROS hired outside consultants to help deal with media and government relations – a complex and time-consuming exercise.

Unfortunately, in a very polarized debate, there is often little room for compromise. We had the experience of being simultaneously hailed as a success and raised as an example of what can go wrong.

From these questions arise predictable answers. Over the two years of re-referral, aggressive attempts were made to increase the size of the system through conventional humanresources, capital and financial approaches, essentially following the approach that led to the waiting list problem in the first place.

TRADITIONAL APPROACHES TO INCREASING CAPACITY Increasing Human Resource Supply

The key scarce, and uniquely trained, professionals involved in radiation treatment are radiation oncologists, radiation therapists, physicists and electronics technicians.

It was widely felt that the greatest scarcity was in radiation therapy. Efforts were made to increase departmental size by accelerating the introduction of a new degree-based radiotherapy program, continuing the previous hospital-based program for a year beyond its previous planned end date and undertaking aggressive out-of-province and out-of-country recruitment programs. Recruitment and retention programs were also instituted for physicists. There was not felt to be an immediate opportunity to increase the number of oncologists; therefore, the focus was on financial incentives for individual workload increases.

Increasing the Supply of Radiation Equipment

An aggressive plan to expand the radiation equipment available to existing departments was developed for the centres in the area around Toronto. Most existing centres were undergoing or

planned to undergo expansion. New cancer centres were planned for three cities in southern Ontario. In addition, a plan for replacing the existing stock of radiation equipment was developed to ensure continuation of the then-current capacity.

Providing Financial Incentives

Radiation oncology was felt to be understaffed, and working at a level that was not sustainable in the long run. There was genuine concern in the oncology community that the demand for services would grow to the point where physician burnout became a significant problem. There was also concern that continued demand would lead to pressure on radiation oncologists to jettison all professional activities that could be performed by others and narrow the scope of practice to a technical service role. There was worry that the shortage in radiation therapists would result in increases in the waiting list if demand for treatment was increased by radiation oncologists performing more consultations. These concerns contributed to a resistance to increasing consult levels beyond the then-current levels. It was felt that radiation oncologists required financial recognition if workload increased, so they were given a generous per-case bonus if they exceeded a base workload.

Changing Departmental Funding Structure

Previously, radiation departments had operated with a fixed budget, insensitive to volume variation. A new volume-based funding structure was introduced to remove this implicit disincentive to increasing volume.

SYSTEM'S RESPONSE

The net effect of these changes was that the obvious disincentives to increase volume were removed, and incentives to increase volume were implemented. Despite this, overall capacity in Ontario increased by only 3% annually. Given that demand was also increasing by 3%, these changes could not lead to a decrease in the waiting list. Attempts to increase capacity internally had failed.

What Led CCO to Consider a Private Contract?

It was at this point that CCO needed to look at the problem differently if it was going to solve the access problem in Ontario. Despite exhausting all conventional approaches to increasing capacity and spending close to \$30 million on out-of-country treatment, Ontario was no closer to solving the access problem than it had been two years ago. By changing the focus of the problem to a simple and direct description of the issue, CCO was able to consider a new approach. The question became: How can we treat 1,000 more patients in the Greater Toronto Area (GTA), and end re-referral? (Base capacity in Toronto was approximately 10,000 patients per year divided between two centres.)

Given that the two Toronto centres had been unable to meet

demand, it was clear that the current departmental structure and relationships would not provide the solution. In addition, the existing departments treated a large number of patients to a very high standard and performed essential academic and educational roles. There was no desire to put that at risk. Increasing the problem to include a restructuring of the entire system makes the task very complex and takes away from the central problem of increasing capacity to end re-referral. By simplifying the problem definition, contracting out to an independent provider became a reasonable option.

There is a big difference between contracting out radiation treatment services when this constitutes one of a series of reasonable options, and when it is the chosen option. The management of the radiation waiting list problem was under a political and media microscope, which meant that contracting out would be second-guessed every step of the way. That the CCO board chose this option underlines the frustration it felt with the fact that radiation oncologists did not increase capacity despite a growing and urgent demand for radiation treatment. The board entered into a relationship with CROS as a business-like way of managing this urgent problem. However, faced with an intractable problem but a controversial solution, the board was subject to criticism for choosing this approach. The provincial auditor strongly criticized CCO for not following bureaucratic due process with respect to the contract. In turn, the provincial auditor's actions were significantly criticized by others. The CCO board subsequently acknowledged the provincial auditor's criticisms, but nevertheless, felt that it had successfully managed an acute problem of access for Ontario cancer patients. The board also felt that it had provided an opportunity to develop a model of significantly increased efficiency that might well be used to drive the system as a whole in future.

OUR APPROACH AND ACCOMPLISHMENTS

Why Did CROS Succeed When Existing Centres Couldn't Increase Capacity?

The fundamental reason CROS was able to succeed is that the expectations CCO had for CROS were simple and straightforward – that is, there were no other complexities to the relationship. CCO had three simple goals for CROS:

1. Meet medical standards of care.
2. Treat 1,000 patients per year.
3. Do this without poaching staff from the existing clinics.

Other than these three goals, we were free to determine how best to organize ourselves. Also implicit in these three simple goals is that our existence did not threaten the academic or educational responsibilities of the three existing centres in the GTA, in the same way that forcing these centres to increase their capacity by 1,000 patients per year might have.

Comparing Actual Treatment to a Care Path

We put into place numerous quality-of-care measures. An example of an interesting measure was a comprehensive review of our management of prostate cancer cases, in which we compared actual treatment to our care paths. From May to August 2001, 128 cases of prostate cancer were seen at CROS. In 94% of cases, actual treatment was validated against our care path/protocols. All cases outside of our care path/protocol were reviewed by the medical team. This review was used to improve both individual management and clinical pathways. This was a time-consuming but extraordinarily useful exercise.

What Did CROS Do, and How Did It Increase Capacity?

Our three goals drove our thinking on how to structure our department. Meeting medical standards of care is a given, and served as the starting point for system design. Objectives two and three, combined with underlying staff shortages, meant that we needed to be receptive to a complete redesign of our work processes, as we would be predominately using part-time staff working an extra job, and people who had stopped work to stay home with their children. From there, we focused on the work that needed to be done, rather than who had traditionally done it. With part-time staff it was essential that our processes be clear, easy to understand and compartmentalized.

Identification of radiation therapists who wished to work for CROS was easier than identifying the physicians. Almost immediately we generated treatment capacity for 1,000 patients, but had identified only one physician. Almost all of the radiation therapists came from within Toronto, and almost all of the oncologists came from outside of Toronto.

Operational Efficiencies

Our focus was to ensure that all professional staff made the best use of their time, and we were relentless in our study and analysis of this. We took a two-step approach. We first attempted to develop the most efficient clinical system we could, emulating best practices. The second step involved a willingness by everyone concerned to admit that we may not have succeeded in this.

The makeup and responsibility of the senior management team was critical (one physician, two radiation therapists, an administrator and a certified management accountant). This team had the skills and experience not only to design our system, but to systematically review and modify it on an almost constant basis.

APPROACH TO SYSTEM DESIGN AND REVIEW, AS IT RELATES TO EFFICIENCY

In designing our system, we recognized that most of the work involved in the simulation, planning and treatment of patients was performed by radiation therapists, and that a significant

number of handoffs occurred in the treatment process. Our focus was not to reduce the number of handoffs, but to ensure that when a handoff occurred that we understood how the work done prior to the handoff affected the work done afterwards.

In our discussions, one area identified as a frequent source of inefficiency was the working relationship of physicians and allied health professionals. Stories of patients and therapists waiting 20 or 30 minutes to see an oncologist are common. Determining why this happens was less important to us than designing our system to ensure it didn't happen at CROS.

In our design we asked three questions.

1. What must physicians do to ensure that the therapists worked as efficiently as possible?

For example, physicians needed to sign off all films and plans by the end of the evening so that they were ready the next day, and the physicians needed to come immediately when asked. We implemented this through process design, and hiring a clinic aide with responsibility for clinic logistics. However, the most important aspect of this was the understanding that the physicians should answer to the needs of the therapists as much as the other way around.

2. What do therapists and physicians need to do to ensure that the patient's treatment is provided as efficiently as possible?

The specifics are less important than the priority we gave to ensuring that there were no surprises when the patient arrived.

For example, in the two-step process of preparing for treatment, patients often come for two visits. While we could not always eliminate the need for two visits, our aim was to have the capability to allow patients to have a single visit for consultation and simulation. By asking this question in this manner, we could systematically remove roadblocks, and then insert processes which facilitated efficiency. The CRO ensured staging was complete prior to referral. We reviewed all charts as soon as they arrived for completeness. The consulting physician received the chart immediately to review, and gave guidance as to which treatment the patient was likely to require. This information allowed for accurate booking of simulation. If there were questions, the physician would phone the patient directly to discuss the case.

3. What performance measures did we need to put into place to track whether or not we were meeting our goals?

When we set a goal, we set out to measure it. Efficiency measures were developed to be straightforward and meaningful to anyone who used them. We developed standard treatment times for each technique, and then compared actual hours of operation to the expected treatment time. As a direct result of our continuous review of treatment processes,

CROS experienced an increase of 7.5% in the number of radiation treatments delivered over 2001/2002 with only a 1.3% increase in hours of operation. Achieving this was detailed work that required both radiation therapists who understood and performed the work, and non-experts who had no preconceived ideas as to how work needed to be done.

In a patient satisfaction survey performed by CCO during our first year of operation, 100% of patients stated care was excellent, and 94% stated they would recommend the clinic to friends.

CROS underwent a comprehensive external expert review of operations in January 2002. The conclusion from that review was that CROS provided good-quality care.

EFFICIENCY GAINS

Our efficiency gains were remarkable. On the treatment floor, radiation therapists were 60% to 70% more efficient. Physicians were at least 100% more efficient. It may not be possible to translate all of these efficiency gains to the rest of the system, but they do indicate that there may be an opportunity there.

MEDICAL STAFF ORGANIZATION

The medical staff consisted of one full-time, five regular part-time, and five occasional part-time physicians, coming from six different institutions. With part-time physicians it was essential that they focused on new patients rather than provide routine followup that could be done elsewhere. In this regard, we emulated the best-practice model of community-based followup as widely used in British Columbia and Alberta. While this approach frees up time, it is only part of the reason CROS physicians were able to work so effectively in clinic. In addition, the responsibility for clinic logistics was placed in the hands of a clinic support person, rather than the physician. Remarkably, this resulted in some of the greatest efficiency gains. The implication of this can be fully appreciated only by comparing the average workload of a physician at CROS to that of the average Ontario physician. A CROS physician working one evening per week for 48 weeks a year would have seen 117 patients, whereas the average workload for a full-time radiation oncologist in Ontario was approximately 250 new cases.

These data represent the actual observed workload at CROS and the average workload of an Ontario radiation oncologist based on practice in 2001/2002.

Table 1. Comparison of MD workload per clinical shift

MDS	New & Planned Patients	Followup Visits	Total Patients
CROS	New	2.45	6.65
	Planned	2.36	
	Total	4.81	
Ontario	New	0.92	6.43
	Planned	0.82	
	Total	1.74	

RADIATION THERAPY

CROS employed 50 part-time and five full-time radiation therapists. This number of part-time staff meant that we needed to pay particular attention to continuity-of-care issues, and put into place numerous checks as well as reviews of treatment delivery. The external review confirmed our belief that we had dealt with this well.

We achieved a 60% improvement in efficiency on the treatment floor when compared to operations elsewhere in Ontario. As with medical staff, this reflects the process of continuous review of operations.

Table 2. Comparison of radiation therapist staffing levels

Staffing Levels	CROS	Ontario
Radiation therapists per linac per equivalent eight-hour day, including allowances for vacation, breaks and sick time	4.0 therapists	6.5 therapists

CONCLUSION

For 25 months, Ontario sent breast and prostate cancer patients to the United States for treatment. CROS was established to deal with this problem. Now that no patients have been referred to the United States for two years, waiting times for radiation therapy are down to two weeks and the publicly managed clinics have started to operate evening clinics, CROS has been deemed to have fulfilled its mandate, and is no longer necessary. The question is, what has really changed in two years? Is the system basically healthy, but needed some short-term external support to get back on its feet? Or are the problems deep, ingrained and systemic? Future analysis may answer that question.

While contracting out management of core clinical services to CROS clearly achieved the goal of ending re-referral, the lesson is not just that private management may be the right option. The lessons have to do with the approach to problem-solving, and with staying focused on the outcome. There is the importance of clearly identifying the problem that needs to be solved, and not letting the problem become bigger than it really is. In our example, the problem had originally been framed as the need to increase capacity within the current departmental structure, which made it unnecessarily complex. The real problem was straightforward (how can we treat 1,000 more patients?). This simple problem redefinition both allowed CCO to consider contracting out and allowed us to focus our efforts. The importance of having a focused contract with clear deliverables, as well as a clear delineation of scope of responsibilities, cannot be overemphasized.

There is a very important lesson regarding resistance to change within healthcare. In the example of CROS, resistance was broad and deep. Individuals outside of healthcare took up the debate. Canadian columnists wrote negative and positive pieces on CROS; articles appeared in both the *Wall Street*

Journal (May 29, 2001) and the *New York Times*. CROS was referred to as a for-profit company that took needed tax dollars away from the provision of care. The rhetoric began to overtake a serious discussion of how or why contracting out allowed for a previously unattainable increase in capacity. This profound resistance had another effect. The solution of attempting a short-term contract to treat patients could not be considered until all other options were utterly exhausted. Even the solution of spending close to \$400,000 a week sending patients to the United States had to begin to fail before consideration was given to a new approach. CCO withstood a tremendous amount of internal and external pressure when the contract with CROS was announced. In other words, 1,656 patients travelled to the United States for treatment who might not have needed to. With this level of resistance, the commitment of CCO to implementation was as important as ours. Organizations that wish to consider contracting out core clinical services must be prepared for possible profound resistance.

Those opposed often said that while they might find CROS acceptable in that it served the public good, they were concerned about where the approach of allowing for-profit care will lead. This implies it is possible to predict where it will lead. In a system as complex as healthcare with the various players, events, actions and reactions, it is not possible to predict where a single approach will lead. However, it is possible to establish goals, and measure success against those goals. The challenge for those responsible for the system is to clearly identify a small number of goals against which success can be measured, and then judge experiments by those metrics.

In considering whether CROS was successful, we were judged more by the structure of our relationship to CCO and the Ministry of Health than by our accomplishments. We accomplished exactly what we were supposed to, but the structure didn't fit with the conventional wisdom as to how publicly funded healthcare should be structured. It was as if this conventional wisdom were so deeply ingrained that many people couldn't believe that there might be something to a structure that facilitates efficient high-quality healthcare, improves access for patients and increases satisfaction for staff and referring physicians. It was a remarkable experience. 

About the Author

Thomas McGowan, President and Medical Director of Canadian Radiation Oncology Services, graduated from medical school in 1985 (Queen's University) and obtained his specialty in radiation oncology in 1991 (University of Toronto) and his MBA in 1995 (University of Toronto). In January 1998, he was appointed to Cancer Care Ontario as Co-ordinator of the Radiation Treatment Program, and then as Executive Vice-President in April 2000. He left Cancer Care Ontario in January 2001 to found Canadian Radiation Oncology Services. Dr. McGowan can be reached at Tom.mcgowan@cros.ca.

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