Chapter Three: Emergency Preparedness

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Introduction

The Panel's work is not to prepare for the last crisis. Rather, our job is to provide advice to assist in making sure that the Ontario health system is as ready and as equipped as possible for the next crisis, whether it resembles SARS or not.

SARS was not the pandemic influenza outbreak that many have feared; indeed, in light of what is increasingly becoming known about SARS, it is likely several orders of magnitude lower in terms of overall risk to the population. SARS has, however, taught the healthcare system a great deal about vulnerability, preparedness, and the need for far greater emergency planning within the sector if future risks of greater magnitude are to be effectively managed.

Concern and investment in emergency preparedness in general have naturally grown over the last few years in the aftermath of the 9/11 terrorist attacks. Subsequent anthrax scares and fears around bioterrorism have further illustrated that emergency planning has to be seen as a task involving public health officials. The challenge for the broader healthcare sector is to move from a mindset that sees emergencies as external events that demand a clinical response, to being a sector that can respond to an emergency even while its own operations are directly impacted by the event.

If anything is to be learned from SARS it is that the health sector must have the capacity to both effectively protect itself from and respond to emergencies that impact the sector as well as fill its traditional role of responding to external crises and providing care to others.

At the national level the Panel acknowledges that there is indeed work underway. In October 2001, the Federal/Provincial/Territorial (F/P/T) Deputy Ministers of Health created a Special Task Force on Emergency Preparedness and Response to strengthen emergency preparedness and response capacity in the health sector across Canada. Health Canada's Centre for Emergency Preparedness and Response (CEPR) is working with the Task Force in a number of areas, including the development of a Canadian pandemic influenza plan and refinement of the smallpox contingency plan.

Work is also underway at the provincial and local levels. Provincial governments and Public Health Units across the country maintain and are developing plans for a number of specific health threats. In the aftermath of SARS, the Panel heard that many professional associations and healthcare facilities are also reviewing and updating their existing emergency and contingency plans. That said, there is still a clear shortfall between what has been done to date and what needs to be in place.

The Panel heard repeatedly, from interview participants and submissions, that the resources to consolidate the work that agencies and institutions are devoting to preparedness and getting ready for future infectious disease outbreaks are not adequate. Equally important, the Panel has heard that these individual profession-specific or institution-specific efforts need to be harnessed and coordinated if they are to be effective. While Ontario healthcare providers lack dedicated resources for emergency preparedness, they especially lack a coordinated framework for health sector emergency response – part of a broader whole of emergency response. Addressing the need for greater guidance and coherence is therefore just as significant as the absence of dedicated resources.

Public health…must also be positioned, resourced, and sufficiently linked to support any broader, health sector-wide response to emergencies that threaten the health of the public on a larger scale.

While emergency preparedness in the broader health sector must cover many areas, ensuring readiness for infectious disease outbreaks must continue to remain a high priority on a fairly long list. Public health must be able to effectively manage the local day-to-day logistics of infectious disease outbreaks; they must also be positioned, resourced, and sufficiently linked to support any broader, health sector-wide response to emergencies that threaten the health of the public on a larger scale. Future events may touch on far broader aspects of the health system and emergency response system than did SARS. At a minimum, health sector emergency preparedness includes the following areas:

- Developing, maintaining, and testing of a generic response plan for infectious disease outbreaks and other health emergencies. In addition, developing, maintaining, and testing of contingency plans for specific public health threats, including pandemic influenza and smallpox.

- Ensuring coordination of health sector emergency preparedness, response, and recovery activities in conjunction with broader emergency planning.

- Ensuring there are emergency management structures in place for public health emergencies, including alert systems, personnel and provisions, and facilities.

- Training and education related to prevention, response, and recovery.

SARS revealed that we were not ready for a major infectious disease outbreak. Few of the above measures were in place in sufficient depth at the provincial level. Moreover, those measures that were in place were not necessarily part of the day-to-day functioning of either the Ministry or the field.

We have no way of knowing what the next health emergency may look like. However, enabling the health sector to effectively carry out its functions as one component of a major emergency response will require significantly greater pre-planning, coordination, and capacity than was in place when SARS arrived in Ontario.

Key Learnings

Not Enough Preparation

The level of preparedness for the SARS outbreak varied among levels of government, and across health units and organizations. The Panel heard that several Public Health Units had emergency response plans in place, and many used elements of their pandemic influenza plans during the SARS outbreak. In addition, Public Health Units that had in place existing relationships with other providers in the healthcare system were well positioned to build an effective response.

These relationships and plans show the value of preparedness activities, but these were of limited use outside of local areas without strong links to the broader response effort.

Like some Public Health Units, Health Canada and the F/P/T Network on Emergency Preparedness and Response were working on several planning initiatives to prepare for public health emergencies. Examples include the National Smallpox Contingency Plan and the Pandemic Influenza Plan. Health Canada adapted relevant components from the Pandemic Plan during the SARS outbreaks, and deployed a small number of staff to the Toronto area (GTA).

The Ministry and the provincial government both had emergency response plans. However, the Ministry had done little recent planning beyond the basic emergency plan. The Ministry was doing sporadic work on pandemic and smallpox contingency plans, but this work was not yet disseminated broadly when SARS hit. The National Advisory Committee indicated that SARS exceeded the response capacity of the Ministry's Public Health Division; this was also heard by the Panel at interviews and in the submissions.

There was no emergency plan that the Ministry or healthcare sector could easily apply. There was no off-the-shelf plan to assist with a disease for which little was known internationally; this is accepted by the Panel. The Panel also accepts the point that, as will likely be the case in future emergencies where what is not known exceeds what is, a narrow pre-determined blueprint will rapidly lose relevance in the face of unfolding events. If the relationships, structures, and processes are not in place to allow flexibility and a degree of agility in responding to the specifics of any given crisis, we will still face immense challenges even with the best of plans.

[We] recognize the effort and commitment of everyone who worked to contain the spread of SARS…The fact that they [healthcare workers] did this while ill-equipped and without clear guidance is a testament to their skills and dedication.

Recognizing this, it is fair to say that the basic scaffolding of emergency preparedness – namely, the protocols, structures, networks, infrastructure, and technology supports – in the health sector and at the Ministry was extremely weak. While the absence of the scaffolding was the most significant marker of our vulnerability, our greatest opportunity for change is perhaps ensuring that it is constructed solidly and tested in the future.

The Panel recognizes the effort and commitment of everyone who worked to contain the spread of SARS – at the Ministry, the Provincial Operations Centre (POC), and SARS Operations Centre (SOC); those who cared for individuals and their families who were directly affected by SARS; healthcare providers who worked 18-hour days, and who gave up time with their own families, and bore the exhaustion and stress without complaint – were crucial to containing SARS. The fact that they did this while ill-equipped and without clear guidance is a testament to their skills and dedication. But, without adequate structures and supports, the SARS response was described by the National Report as "a collection of isolated clusters of valiant efforts."

The challenge for the Ministry in the future, therefore, is to view emergency preparedness not first and foremost as a bureaucratic or

theoretical requirement to be juxtaposed to the enormous day-to-day pressures of managing the health system, but as a core business requirement.

The Ontario health system is an industry, which costs over $27 billion annually, employs tens of thousands of people, and serves the health needs of over 12 million people. The Ministry must recognize clearly that, even facing the tremendous financial challenges that it does, the level of resourcing, attention, and support for emergency preparedness must better reflect the size, complexity, and importance of the sector to Ontario and to Canada.

In order to move forward, we must identify some of the barriers we faced, and sketch out the steps for change.

A Lack of Clarity

Without some of the necessary scaffolding and structures in place at the Ministry to respond in a highly coordinated manner to a communicable disease emergency, the province essentially had to develop the plan on a day-to-day basis (a problem compounded by the nature of the disease). At the same time, the Ministry had to work on constructing some of the very basic tools and vehicles to communicate, to analyze, receive, and disseminate the evolving science of the disease.

In the words of OSSAC, we "built the boat while at sea in the middle of a storm." In the words of OSSAC, we "built the boat while at sea in the middle of a storm." The overall result of attempting to create structures and processes at the Ministry level, in the midst of an outbreak that had soon escalated into an international news event, was an ongoing lack of clarity over roles and responsibilities among governments, agencies, and institutions. Lines of authority, reporting, and communication were all unclear.

According to one submission "there was ongoing confusion and lack of clarity as to the respective roles and responsibilities of the Premier, the Minister of Health, and especially the Commissioners of Public Health and Public Safety. Given the likelihood of widespread emerging infectious disease outbreaks in the future, such as pandemic influenza or bioterrorism, these issues need urgent clarification and specification."

The Province possesses, and the Ministry was highly dependent on, the centralized capacity of the POC – the corporate centre for coordination of

emergency response. The POC had effectively responded to past events such as the ice storm.

Many submissions and respondents have stated that the POC structure alone was the wrong model for responding to an infectious disease outbreak. Without a specific plan for outbreaks within the Ministry or for the province, decision makers went with whatever generic emergency model was in place. At times, these models seemed better suited to a fire or flood or the 1998 ice storm than a health crisis. Generic emergency response protocols will often call for a rapid multi-sectoral deployment for the coordination of a response. Hence, at both the provincial level and to some extent the municipal level, police, fire, and broader sectors were linked in to emergency response centres – only to find that the nature of this emergency called upon a skill-set and an expertise that was not at the core of their organizations.

The above observation is not meant to suggest the lack of importance of effective local or provincial emergency coordination capacity. Far from it: It is to suggest that for the Ministry and for the health sector in general, improved coordination, planning, and capacity within the sector are a pre-requisite for effective participation in either a health-specific emergency or a more general emergency with diverse health impacts.

Hospitals themselves also drew on what was in place to mobilize and respond to the outbreak relying heavily on the existing Code Orange, a broadly understood alert code in the acute care sector that activates communications lines and staffing approaches. Using Code Orange made perfect sense, because little else appeared to fit. However, as we discuss later, Code Orange was in some ways an unsuitable code for SARS and is an area that requires broader work.

The lack of a unifying emergency infrastructure that could reach all healthcare providers, the Panel heard, resulted in wide groups of healthcare providers being poorly served and assisted during the outbreak, especially in the early stages. In this regard, the Panel heard that the community laboratories and community-based service providers were initially peripheral to response efforts, and the efforts to communicate with them, for a range of reasons, were not effective. This aspect of criticism is easy for us to lose sight of given the subsequent facts showing that SARS was largely a hospital-based disease. We must recall that at the outset, we did not know whether or not SARS could rapidly spread within the community – indeed the founding assumption was that it could. The next disease may be far less forgiving, and the need for effective, timely, and transparent vehicles to reach all health sectors will be essential to our capacity to respond.

In addition, the Panel heard that a number of Public Health Units felt under-utilized and cut-off from the response structure. In part, this appears to stem from a lack of clarity of roles centrally, but also from a lack of familiarity of the hospital sector terrain at some health units, and how best to proceed in playing an active and supportive role.

Public Health Units are the backbone of the public health system, and many Units are examples of best practices. Certain Units have strong relationships with long-term care facilities (LTCs), Community Care Access Centres (CCACs), and hospitals. These relationships are invaluable for planning and responding to an outbreak. Many respondents argued for a central role for Public Health Units in planning and responding to the next outbreak. However, while we clearly recognize the potential role, the Panel has heard repeatedly that structure, process, and clarity are required to guide the response, both in terms of central leadership and in terms of the relationship between public health and the broader health sector. This is an issue discussed in some detail earlier in this Report.

The Panel also heard again and again about the need to link local and provincial strategies for responding to outbreaks, with efforts at the national level. Regardless of the degree of coordination that did or did not take place between the levels of government, the overall perception at the provider level is that the response was not coordinated and that conflicting messages, case definitions, and a lack of adequate central support hampered the response effort.

"…there needs to be better linkages between the various players…this along with the concept of an integrated, flexible contingency planning process that links federal, provincial, and local levels would make responsiveness on the short term and long term much more effective…"

Processes, roles, and responsibilities between the levels of government must be clear prior to an outbreak. More than this, however, the processes, roles, and responsibilities must be clear not only to the provincial officials charged with their negotiation, but to the health sector as a whole. Clarity must exist hand in hand with transparency.

We have strongly heard that future plans should include a clear definition of the leadership structure for the response, with one individual as lead for the command centre. As one respondent argued "strong clearly defined leadership is required from the first sign of an emergency to the final stages and conclusion. Clear leadership provides focus and direction, eases

anxiety and gets thing done efficiently. A single individual should be named and the person should have recognized health care experience as well as strong leadership capabilities."

Respondents supported linking plans and strategies among all organizations responsible for planning and leading the response. Many respondents suggested an overall plan that lays out the role of each provider in the system. The idea of an overall plan does not lessen the need for specific outbreak plans at the organizational level, but where possible the plans should be consistent within a health sector and understood and operationalized on a regional level.

Very Little Integration

Both this Panel and the National Advisory Committee heard that the overall lack of system integration within the Ontario healthcare system and the absence of effective regional coordination vehicles impeded the cross-sectoral response.

The Panel heard of limited cooperation among hospitals during the SARS emergencies – resulting in difficulties facilitating patient transfer, limited ability to pool resources, and redeploy and harness collective efforts. Over time, the Panel heard that more effective working relationships did evolve, and in certain instances, remarkable cooperation transpired.

There appear to be many reasons for this uneven level of cooperation; some appear to stem from a lack of emergency preparedness beyond the doors of individual institutions. For example, very little thought appears to have gone into how hospitals should work together during an outbreak – either at the provincial level or at the facility level. Recognizing that a major outbreak will pose even greater challenges than SARS, this is a system weakness that needs to be addressed before the next crisis.

With no comprehensive regional planning for hospitals and non-acute facilities, few mutual aid agreements were in place. Therefore, there was little capability to redeploy staff that, compounded by significant shortages in the areas of critical care, heightened the escalating impact of staff quarantines on system capacity.

An Attempt at Structure – The Alliance Model

We heard that the attempt to create regions and structures of support during SARS 2 through the 'Alliance hospital model' was, at least from a system perspective, a rational response to the impacts felt on delivery earlier in the outbreak.

The Interim Healthcare Alliance ('Alliance') was a coalition of four GTA hospitals focused on the assessment, management, and treatment of SARS patients. The GTA was broken down into three networks or management areas, with three of the Alliance hospitals acting as network hubs (North York General Hospital, Etobicoke site of the William Osler Health Centre, and the General Division of the Scarborough Hospital). The fourth site (St. Michael's Hospital) was to provide tertiary level support for all GTA SARS cases.

The Alliance model dedicated hospitals to the intake and management of potential SARS patients. This, in theory, was to allow other hospitals to provide services and keep their emergency departments open. The designated hospitals operated SARS assessment clinics and special units to care for SARS patients. The non-designated hospitals in each area gave some support to the Alliance hospitals through staffing, resources, and supplies. They also took non-SARS emergency cases and patients from the designated sites. The Ministry and healthcare sector provided support systems for the designated sites. The support system included an expert advisory group, on-site infection control expertise, and a dedicated line and assistance for patient transfers.

The Panel heard that at best, the Alliance model was a somewhat desperate effort to create structure and logic in the middle of a crisis, while a number of non-alliance hospitals continued to carry a heavy burden of SARS cases in SARS 2. It is also a very vivid reminder of the need for effective *advance* contingency planning within the health sector. The designation of Alliance hospitals brought with it a series of major issues that affected far more than the designated hospitals themselves: firstly, issues of staff safety and the importance of effective advance communications to staff; secondly, the need for an effective contingency plan to have resolved issues of compensation, staffing levels, redeployment, and supplies in advance; and, thirdly, the conditions and criteria, in terms of both service provision and support that the designated hospital must meet.

That these conditions were not wholly or in some cases partially addressed prior to designation during SARS is wholly understandable given the nature of the crisis. It will not be acceptable to either healthcare providers or institutions if these are not comprehensively addressed prior to the next outbreak – whatever form that may take. The Panel has heard clearly that much of the anger and ill-will caused by compensation decisions during SARS could have been lessened had contingency plans been in place.

However, for all of the problems, the Alliance model appears to have had some limited success in protecting certain key services that were clearly at

risk during SARS 1. This is borne out by the preliminary data produced by the National Advisory Committee and preliminary analyses undertaken by the Institute for Clinical and Evaluative Sciences (ICES). This data appears to suggest that the system impacts of SARS on patient care were significantly less during the period of SARS 2. That the Alliance model was even partially effective is quite remarkable given the context of its development and the absence of cooperation on some fronts.

Advance contingency planning and/or effective working networks on a regional level were also absent for different types of facilities and agencies, as well as different sectors in the healthcare system. Most notably, we often heard that Public Health Units in certain areas could have assumed a much larger role in assisting hospitals.

The Panel heard that at times response efforts were impeded by the absence of pre-existing working relationships and a lack of clarity as to the precise expectations of local Health Units vis-à-vis the acute care sector. In certain cases, this resulted in a degree of animosity and tension that mitigated against a more coordinated effort.

Many respondents from the public health and hospital sectors commented on these tensions. More positively, in a series of joint public health/acute care forums sponsored by the Panel, both sectors clearly articulated the need to work together more closely in order to understand each other's skills and expertise and define their relationship; this is especially true with respect to infection control where there is a perceived lack of role clarity. For these positive sentiments to yield the benefits that are clearly possible, the Panel actively encourages the Ministry to pursue the regional infection control network model outlined earlier in this report, and thus formalize and support these local processes.

The Panel heard widespread support for a regional network approach as a potentially highly effective mechanism to better link and coordinate response to infectious disease outbreaks.

The Panel heard widespread support for a regional network approach as a potentially highly effective mechanism to better link and coordinate response to infectious disease outbreaks. Such networks would also have the added value of better positioning the health sector as a whole to link into the local emergency response structures in place at the municipal level.

Problems with Code Orange

On March 26th 2003, the province declared a state of emergency and mobilized the Provincial Operations Centre (POC). At this time, all Ontario hospitals were directed to activate their Code Orange emergency plans, if they had not done so already.

Code Orange is part of the Uniform Emergency Codes, which the Canadian Healthcare Association (CHA) endorsed for use in Canada, and which the Ontario Hospital Association (OHA) recommended for adoption in 1993. While other codes for major emergencies indicate things like evacuation (Code Green) or in-facility chemical spill (Code Brown), Code Orange indicates an external disaster. Ontario healthcare facilities recognize this as potentially signaling a rapid influx of patients being brought to hospitals by ambulances. Code Orange is intended to apply to a specific area and to be used for a set period, as opposed to on-going emergency management.

The Panel heard that Code Orange was instrumental in establishing a chain of command and control, mobilizing resources, and allowing many affected facilities to minimize or eliminate non-essential services. However, consensus is that Code Orange was not entirely appropriate for an infectious disease outbreak; and, it may have caused unnecessary disruptions to providing services in an already-challenged healthcare system. As one hospital observed "The pros for this model were that everyone received the same message and was able to respond immediately. The cons were that the system became paralyzed."

Given the original purpose of Code Orange, many hospitals commented that its use for SARS was problematic. There was not an extraordinary number of incoming patients, as would occur during a natural disaster; paradoxically, the challenge in controlling SARS was to significantly restrict access to healthcare facilities.

Furthermore, Code Orange was never meant to have such broad geographic application, or to be used for such a sustained period. As a result, hospitals unaffected by SARS (most outside Toronto/GTA) were forced to reduce service significantly, thereby delaying procedures that, arguably, may have potentially put critical patients at risk.

In some ways, the use of Code Orange is illustrative of the perspective that many in health care have had concerning emergencies: emergencies are things that happen external to the healthcare system and to which, historically, the sector has responded with the primary goal of providing care and support to others. SARS changes this paradigm somewhat. SARS has taught us the need to recognize the responsibilities for providing care

externally as well as for the need for responsiveness and understanding of the risk that an emergency might have on our healthcare providers, services, and facilities.

It is in part for this reason that the Panel heard strong support for re-examining Code Orange, preferably with a view to developing a new emergency code specific to infectious disease outbreaks and possibly biological and/or chemical contamination.

The Panel strongly supports that the Ministry, OHA, and CHA jointly and immediately undertake work to examine the specifics of a modified Code Orange or other code indicating infectious disease outbreak, and how it could interface with provincial direction in an emergency. The purpose of any new code should be clearly geared to signaling what an organization needs to activate vis-à-vis patient admission and bed use, and what it needs to activate internally to inform and protect staff.

Legislative Challenges

The Panel is aware that a number of questions have been raised by healthcare facilities and organizations regarding the legal authority behind measures taken to manage much of the SARS outbreak. Others involved in directly managing the outbreak have echoed some of the same points. These include: the need for sufficient powers to be in place during an emergency; the need for clarity regarding the authority to share information; and, the need for authority to undertake emergency transfers of ALC patients. For these reasons, the Panel urges a comprehensive review of relevant Ministry legislation.

Ontario should also make efforts to ensure that legislative flexibility exists in order to adapt emergency responses on the basis of the extent of the outbreak. In particular, emergency powers currently found in the *Emergency Management Act*[1], as well as in other related legislation under the purview of the Ministry, must be reviewed as a starting point for the establishment of a legislative regime that allows for a graduated system of response by the province to health emergencies, tailored to the level of actual or perceived risk. This review should involve a comparison against emergency powers legislation in other jurisdictions. The development of such a regime must be done with an eye to ultimate federal/provincial/ territorial harmonization of all legislation creating emergency powers.

Challenges Presented by Visitor Policies

Once Code Orange was activated, many healthcare organizations established a 'command and control' approach internal to each organization in an effort to contain the outbreak. As part of this approach and to comply with Ministry directives, hospitals, and long-term care facilities significantly revised visitor policies. At the outset, they were forced to suspend visiting altogether. Later, the modified directives allowed limited visitation, depending on the type of facility. While long-term care facilities were mandated to allow only one visitor at a time, hospitals were permitted discretion in setting appropriate visiting policies.

Most observers saw this dramatic reversal in the general practice of providing unlimited access to visitors as necessary and, indeed, effective in controlling the spread of the disease for two reasons. First, given what was known, limiting visitors was a wholly rational approach to managing risk and limiting possible exposure. Second, the reduction of visitors lessened the demands on staff who were already coping with immense stress and working in extremely challenging conditions.

Yet it was controversial. And, as we discuss elsewhere, it was a move that was fairly poorly communicated to the public as patients or users of the system – a lesson in communications that needs learning for the next outbreak.

Furthermore, restricting visitors very much runs counter to the prevailing practice in modern healthcare facilities of permitting as much family involvement as possible in the care of the patient; this is widely held to have a positive impact on patient wellbeing and, in certain circumstances, on patient outcomes. For example, studies conducted in coronary care and post-anesthesia care units suggest that visitors can reduce the anxiety level of patients.[2] Moreover, it has been acknowledged that such involvement may assist family members in preparing themselves for caring for the patient at home. Not surprisingly then, liberal visiting policies have increasingly become the norm.[3]

However, there is evidence to suggest that visitors can be the source of hospital outbreaks of infectious diseases or, alternatively, may themselves be exposed to communicable diseases while in the facility. As a result, restricting visitors is often used to control infectious disease outbreaks, particularly those of a respiratory nature.[4] Facilities were thus faced with the challenge of weighing the need to contain the spread of SARS against the known benefits of family contact and the potential negative impact such restrictions might have on patients.[5]

No matter how well-intentioned, the task of implementing the directives on visiting was a difficult one. Many facilities struggled in their efforts to determine how to balance the interests of patients and their families with the need to minimize the spread of infection. Significant problems existed on both sides of the spectrum; some providers complained about a lack of sufficient enforcement of visitor policies and too 'lax' an approach for certain facilities, while in other facilities, family members were restricted from seeing dying relatives.

In the words of one respondent "Directives that compromise the survival of clients because of the need to protect providers confront providers with ethical dilemmas that beg for discussion and further resolution." Another respondent spoke of the difficulty of implementing this requirement "despite knowing the importance of family and social support to clients during serious illness, injury or death" and being aware of "the devastating impact upon family members when denied access to an ill parent, spouse or adult child." In long-term care facilities, this issue was particularly troubling for the reason that "the SARS crisis coincided with several important cultural and family-centred dates - Easter, Passover, Mother's and Father's Days."

Matters were also complicated by the fact that at certain stages each facility was given responsibility for modifying their own respective visitor policies, without guidance or assistance from provincial authorities. As one respondent observed "Materials that could have been developed centrally by an expert group and customized locally would have been more efficient, cost-effective and supportive of frontline staff. As it was, every organization was scrambling to respond, re-inventing the wheel."

Understandably, some patients and their families strenuously objected to the new measures, which in turn caused discomfort for those responsible for ensuring compliance. As a result, staff was often unhappily "placed in the role of enforcer rather than care provider," causing them to be "in frequent conflict with families."

Many also observed that the lack of legal or regulatory authority was a barrier to enforcement. As one respondent commented "The restriction of visitors was very difficult to enforce. A lot of families would just come in at separate times and we would only find out later that too many visitors were in the facility. In the future could there be some legislation stating a fine or something for breaking the regulation set out by the MOH?" Another suggested that, at a minimum, "it would have been nice to receive an official letter from the MOH that could have been handed out to families explaining why we were having some restrictions with visitors."

Despite these challenges, the Panel heard widespread support for examining the appropriate level of public access to hospitals on an on-going basis. Overall, consensus is that adopting more stringent visitor policies permanently and monitoring visits more closely (possibly through a visitor log) have significant benefits and need to be actively pursued.

As one respondent suggested, "We should have a standardized visitor policy which takes our hospitals from being shopping malls and coffee shops to a more restricted designation where some areas of the hospital may be for public consumption but other areas are limited to visitors." Furthermore, many hospitals indicated that they would welcome uniform hospital visitor protocols, which they could immediately activate during infectious disease outbreaks.

We believe that we should examine public access to hospitals, and, in the immediate term, review visitor policies in the context of infectious disease outbreaks, as part of emergency preparedness in Ontario. To offer some assistance in developing some form of more consistent approach, the Panel

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has commissioned an expert/ethicist review of visitor policies with a view to documenting potential models worthy of consideration. We intend to provide further comment on this matter in the final report.

Surge Capacity

The need to build strong surge capacity into the healthcare system is another theme for change. This phrase has become something of a mantra in healthcare circles post-SARS. With overall occupancy rates in the acute care sector at or around 96% and an ongoing problem with waiting times, it is clear that simply adding bed capacity will not in and of itself create greater surge capacity. Beds cannot and, indeed, probably should not be left empty while individuals wait for care. Therefore, in addition to addressing chronic under-capacity in the system as a whole, we must formalize alternate mechanisms to free up potential capacity during an emergency. 'Surge capacity' is probably best understood as not simply adding more staffed beds, but as the ability to expand care capacity in the face of sudden increases in demand.

The National Advisory Committee discusses this concept in its report, focusing on developing the national capacity for the deployment of Health

Emergency Response Teams (HERTs). In this area and in others, SARS taught us lessons applicable to the healthcare system in the future.

ALC Discharges

With respect to bed capacity, many respondents supported the Ministry designating all Alternative Level of Care (ALC) clients in GTA hospitals as priority placements to long-term care facilities. This designation, while far from problem-free and not without cost to the individuals and families affected, allowed for a rapid transfer of patients whose care needs could, at least in theory, be met outside of an acute care facility, thereby decreasing the pressure on hospitals and freeing acute care bed capacity.

> **"The Alternative Level of Care (ALC) experience during SARS cannot go unmentioned. During the outbreak a large number of acute care beds that had been occupied for a long time by ALC patients were made available 'instantly.' This phenomenon must be studied and an ongoing system to maximize the availability of acute care beds developed out of this experience."**

This measure may or may not have been of crucial importance in the overall response to SARS. However, the Panel's focus is not just on SARS; the next outbreak may be of a different nature. It might involve mass casualties or a sudden increase in demand for clinical or ward capacity. These scenarios will also require transferring significant numbers of non-acute patients out of hospitals to other sites to free up response capacity.

What the experience of the ALC transfers illustrated was that where you had cross-sectoral cooperation and a common recognition of need, the inability to free up acute care beds (a seemingly intractable problem at the acute care level) could be solved and solved (at least partially) very quickly.

On a large-scale, this experience offers a challenge to hospitals and the community health sector. The challenge includes, certainly for emergencies, codifying and formalizing a rapid transfer policy for alternate level of care patients. The Panel is aware that to do this appropriately, respectfully, and with the supports required, it will take thought and time. We certainly do not pretend that the experience during SARS should simply be adopted without change. That said, if contingency plans could be in place with alternative care locations, prioritization criteria, evacuation and triage plans, and with appropriate supports to ensure patient safety, then the ALC transfer experience may offer us lasting lessons.

The ALC transfer during SARS showed that in the short-term at least, surge capacity within acute care is as much about redeploying or managing capacity as it is about expanding it. In a health system operating at full capacity, this is of particular importance.

The Panel heard that one area of the acute care sector that was particularly impacted by the effects of SARS was the area of critical care. A number of submissions to the Panel highlighted significant challenges accessing critical care beds during the outbreak. The Panel also heard of the shortages in critical care nursing, and is devoting considerable time to working with experts in this area to better assess the need for critical care nurses in an emergency and mechanisms for deploying staff.

A pre-requisite for effectively managing critical care capacity is up-to-date and accurate critical care bed capacity data. Both during SARS and on a day-to-day basis. CritiCall is a mechanism by which facilities track and report available critical care beds. The Panel is convinced of the value of CritiCall, however, research to-date suggests that there is a need to examine and put in place appropriate measures to ensure that CritiCall data is accurate and timely.

Emergency Registries

Innovative work on staffing is underway in Ontario. For example, the Registered Nurses Association of Ontario and the Registered Practical Nurses of Ontario are developing the VIA Nurse Registry. This is a voluntary emergency registry of RNs and RPNs, for deployment to healthcare facilities. VIA is a potential model for other health professions.

The Panel encourages the Ministry to examine those areas in which staffing registries would facilitate rapid deployment of staff in the event of an emergency and look to the VIA Nurse Registry as a potential model. These registries should be developed to ensure access to the necessary skill sets required during an infectious disease outbreak or other health emergency.

Inter-provincial Deployment

The rapid deployment of healthcare personnel is another key area. In 2003, the Deputy Ministers and Ministers of Health endorsed the development of inter-provincial Health Emergency Response Teams (HERTs), which could be rapidly deployed in the event of an emergency situation as needed. These teams, the National Advisory Committee observed, would act as a "platform for mobilization of personnel to address

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the specific requirements of a health emergency."[6] The F/P/T Network is currently developing the HERT program, and is building a central function to support collaboration among Canadian jurisdictions.

"The plan needs to include a mobile crisis team, including infection and disease physicians and nurses and managers with expertise in coordinating emergency responses that can be dispatched within hours to support facilities in crisis."

The Panel strongly supports the ongoing development of the HERT program and looks forward to a greater formalization of health sector memoranda of understanding between jurisdictions, to better formalize support and aid agreement across provincial boundaries in the event of an outbreak or emergency requiring a rapid influx of additional health sector capacity.

The Panel is aware of the complexities inherent in staff redeployment and urges ongoing attention to address the administrative, legal, and logistical challenges posed therein as part of contingency planning at the regional level.

Mutual Aid Agreements

The concept of mutual aid agreements has relevance at the cross-jurisdictional level. Increasingly, the Panel is convinced of the potential value of health sector mutual aid agreements. The Panel heard of a number of facilities and agencies increasingly pursuing mutual aid models. These models, at their most comprehensive, would allow for the redeployment of staff between organizations, shared approaches to training, and pooled access to materials and equipment as required in an emergency.

Given the multiple issues and parties involved in developing effective agreements and the need, to the extent that is reasonably feasible, for consistency, the Ministry, OHA, and other providers should examine the value of developing model mutual aid agreements. Such agreements could also include measures to improve infection control during routine periods. Developing these agreements will require the support of the Ministry, professional associations, and academic health sciences centres.

Elsewhere in this Report, the concept of regional infectious disease networks has been proposed. If the Ministry chooses to undertake this form of approach, the Panel would envisage that one role of the networks would be to support the development of mutual aid agreements among providers and potentially to attempt to codify and coordinate the agreement on a regional basis.

Supplies and Equipment

SARS had a profound effect on the traditional supply and distribution of the protective equipment needed by healthcare providers, particularly at the onset of the outbreak. The Panel heard of the significant challenges experienced at the facility and provider level in accessing basic supplies, as well as at the provincial level.

The threat of SARS, the Panel heard, resulted in healthcare organizations across North America attempting to secure the same supplies at the same time. With no ready access to a domestic supplier of certain forms of protective gear, simply obtaining a basic supply was a huge challenge. Understandably, at times the difficulty some experienced in accessing supplies created immense stress.

The directives required protective gear that in certain cases was unavailable. In some cases, organizations' traditional supply lines were of little use as the suppliers themselves were scrambling to identify available stocks.

SARS thus revealed clear provincial and national weaknesses around both production and distribution of emergency supplies. The Panel is aware of work at the provincial and federal levels to upgrade stockpiles and formalize distribution networks.

As one respondent explains "inter-agency planning and coordination could be improved. This is particularly important in respect to the availability of infection control supplies and equipment. More specifically, we need to develop plans respecting the purchasing and distribution of these resources to ensure this is achieved in the most cost-effective and efficient matter possible. Though we do not all need to stockpile enormous quantities of supplies and equipment for every eventuality, we all require minimum number of resources that are available for primary response and a system that can be facilitated quickly to acquire the rest on demand."

The Panel acknowledges the progress being made in this area. However, we also note the need for both provincial and federal authorities to examine contingency approaches or protocols that would facilitate rapid domestic production of priority supplies if required. This point is important because of the possibility that a future outbreak or emergency on a large scale may have a cross-border impact, thereby restricting the flow of goods. Adequate contingency planning will clearly need to be in place nationally and locally to anticipate this scenario.

Service Continuity

Numerous submissions commented on the impact of cancelling services and procedures, emphasizing the need to create a system that can provide routine care during an outbreak. Many patients who need chronic or acute care may be in danger of losing access to services and medications during a public health emergency.

"In the future, services should not be cancelled...perhaps on a reduced basis but not cancelled completely."

During SARS 1, the directives required GTA hospitals to restrict access to all but the most critically ill patients. As a result, inpatient occupancy and surgical volumes fell. During SARS 2, the Alliance model may have insulated GTA hospitals from substantial and ongoing service reductions. But according to a study for the National Advisory Committee, non-Alliance hospitals could not return to pre-SARS occupancy levels. The Panel agrees with the respondent who states that "we need to manage outbreaks while maintaining service to those who have been booked for operations & procedures because the reality is that re-booking will only increase inconvenience for all patients and cause greater delays for life-saving treatments." The Panel has extensive research underway through the Institute for Clinical Evaluative Sciences and will bring forward a detailed discussion of this issue in the final report.

A New Office of Health Emergency Preparedness: Description and Rationale

The major feature of our Panel's recommendations is a single Ministry office to coordinate health sector preparedness activities and to facilitate the effective involvement and deployment of the health sector in a health emergency.

"Emergency management would be improved by a clearly defined provincial legislative and regulatory emergency response structure, with defined processes, clear powers and defined jurisdictions (provincial vs. municipal)."

The idea of a coordinating and planning body for health sector needs in an emergency does not take away or lessen the need for broader cross-sectoral emergency planning capacity. Indeed, for the health sector to be an effective partner in broader emergency response requires coordination, organization, and significantly greater internal capacity and support than was in place at the Ministry at the outbreak of SARS.

The ability to formalize links with broader emergency response planning and with the proposed regional Infection Control Networks is central to the capacity of this proposed office.

There is a clear need for coordination, consolidation of activities, and greater transparency within the Ministry. We believe that a 'one office, one plan' approach is the best path to ensure that Ontario is ready for future infectious disease outbreaks. A health emergency preparedness office is not only a response to what the Panel heard from many in the healthcare sector; it is also consistent with developments in other jurisdictions.

At the national level, Health Canada has recently developed the Centre for Emergency Preparedness and Response (CEPR), to act as Canada's central coordinating point for public health security issues. The Centers for Disease Control (CDC) has a dedicated program for bioterrorism and public health preparedness. In January 2002, the US Department of Health & Human Services created an Office of Public Health Preparedness with a mandate to direct the Department's efforts to prepare for and respond to acts of bioterrorism and other public health emergencies. Many US state governments also have offices dedicated to emergency preparedness.

Deputy Minister, MOHLTC

Health Emergency Preparedness Committee

Ministry Committee to oversee the establishment and activities of the Office of Emergency Preparedness

Health Emergency Advisory Committee

Provides external health sector advice on provincial health emergency preparedness

Office of Health Emergency Preparedness

Coordinates Ministry emergency preparedness for outbreaks and other health emergencies

Emergency Management Ontario

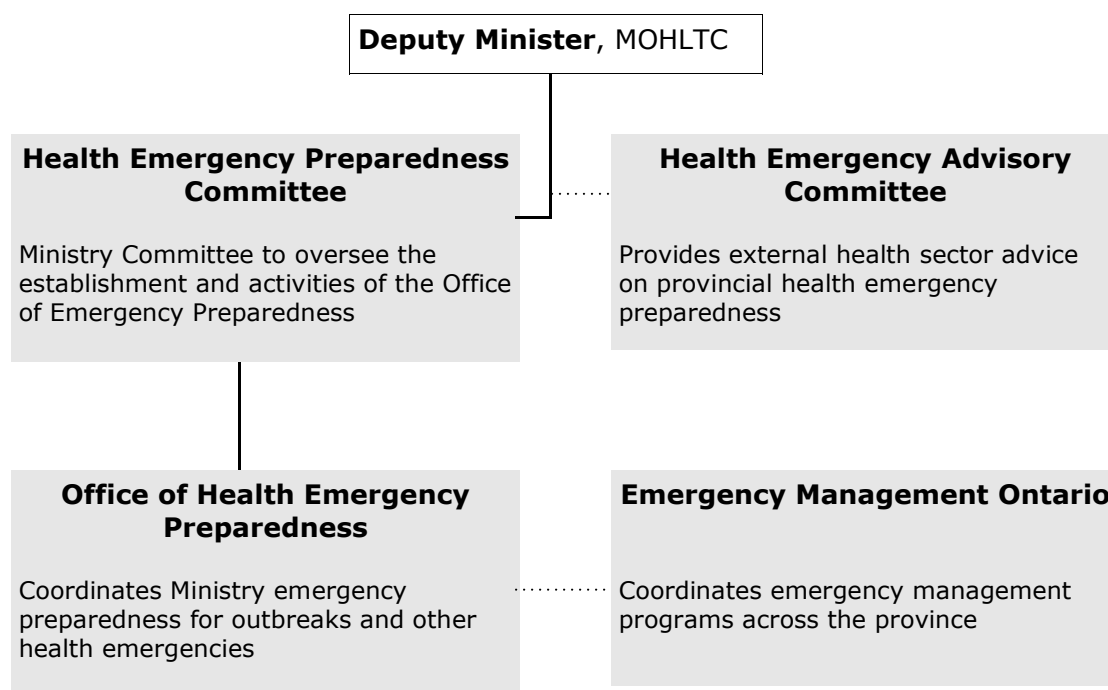Coordinates emergency management programs across the province

Figure 1: Office of Health Emergency Preparedness: Structure and Mandate

California, Michigan, and Florida all have offices of Public Health Preparedness. The Minnesota Department of Health has an Office of Emergency Preparedness. These offices have a similar mandate that includes coordination of planning for public health threats; assessing the preparedness of public health and health authorities to respond to an emergency; raising public awareness; conducting training; and, liaising with other government departments and outside agencies. In the UK, the Emergency Preparedness Coordination Unit is responsible for the coordination of contingency planning and readiness of the NHS to respond to major incidents.

The rationale for the new office is clear in what we heard from the field following the SARS outbreak. People spoke about the lack of coordination and clarity, and about the need for central planning and information in advance of an outbreak. The mandate of the Health Emergency Office would, as proposed, include: the coordination of health sector contingency planning; assessing Ministry readiness; acting as a liaison to other governments and ministries; and, providing information to the healthcare sector and the public, all within the context of preparing for outbreaks and other health emergencies.

Under Ontario's *Emergency Management Act*, the Ministry is responsible for developing and implementing an emergency management program. Emergency Management Ontario (EMO) is responsible under the *Act* for monitoring, coordinating, and assisting in the development and implementation of the emergency management programs.

In widespread emergencies, the Minister of Community Safety and Correctional Services or another Minister appointed by the Premier (through the coordinating role of EMO) may assume a lead role. During a provincial emergency, the Ministry of Health and Long-Term Care is responsible for large-scale human health emergencies, epidemics, and emergency health services.

Local, Regional, and Provincial

The overriding principle that should guide our approach to preparedness for health sector emergencies, or outbreaks or incidents that risk developing into human health emergencies, is to strengthen our capacity to mange and respond effectively at all levels, local, regional, and provincial.

Our goal should thus be to have the level of coordination, structures, and supports in place that allows effective response on the ground to an immediate risk, elevating the level of response required commensurate

only with the degree of risk and the capacity of the lower level of response to meet that risk. This basic philosophy reminds us that attention only to the provincial level will miss the need for robust response capacity on the ground, an element that in certain areas was clearly absent during SARS.

Elsewhere in this Report, the Panel also raised the concept of developing regional networks for infection control. Insofar as these regional networks do get developed (which we envisage as cutting across the silos of the health sector), the Ministry will be supporting an important step in broader health sector preparedness.

At this stage, unlike most Canadian jurisdictions, little stands between the capacity of a local hospital, EHS, and Public Health Unit to manage an actual or potential outbreak and the move to centralized control at the provincial level. Far more responsive and tiered capacity is clearly both desirable and achievable.

Elsewhere in this Report, we have highlighted the need to strengthen the foundation blocks of infectious disease response at the local level and to facilitate more integrated local approaches to infectious disease containment. These measures, too, will assist greatly in building the overall cohesion and organization that the health sector will be able to use should other emergencies arise.

Undertaking and supporting this level of coordination and support is an immense challenge. It is one for which dedicated resources and staffing will be required. We would suggest that this is a logical function for the proposed Office of Health Emergency Preparedness.

In proposing this approach, the Panel is aware of the role at the provincial level of Emergency Measures Ontario, which is responsible for coordinating and monitoring emergency management programs across the province, and the Ministry, which is responsible for planning for health emergencies. For the proposed office to function effectively with the assigned health sector tasks, it will require that effective, collaborative working relationships and clear lines of responsibility are established. The Panel believes that this is achievable and is a vital component to an effective overall emergency response capacity.

In all of the jurisdictions that we identified as having dedicated offices for public health or emergency preparedness, these offices operate alongside of emergency management departments. The fastest way to ensure that the province is ready for a local or widespread public health emergency is for the Ministry to work with its partners in the healthcare system and liaise with the broader emergency management framework.

In order to better ensure awareness of Ministry activities and to allow for the Ministry to benefit from the experience of providers in upgrading its emergency response capacity, the Panel strongly suggests that the Ministry establishes a healthcare reference group to advise on the evolving planning for a health emergency infrastructure.

The recommendations for immediate action contain timelines for completion; where the Panel recommends a review or assessment, there are timelines for submitting an action plan to the Minister. We also recommend that the Ministry post plans and documents on its website.

Recommendations

21. The Ministry should immediately create an Office of Health Emergency Preparedness (OHEP) with appropriate staffing and authority and with a formal link with the Ministry of Community Safety and Correctional Services. The office should be established by April 1, 2004 and should:

    a. report to the Deputy Minister through a Health Emergency Preparedness Committee. The Committee should oversee the establishment of the office and its mandate, and provide ongoing advice and strategic direction for the OHEP
    b. provide leadership with respect to the Ministry's emergency preparedness activities
    c. ensure implementation of the recommendations below within the timelines stipulated. Until such time as the OHEP is operational, the Ministry must act on these recommendations in its place.

22. Once established, the OHEP should act as Ministry liaison with Health Canada, Emergency Management Ontario, and other relevant organizations regarding public health emergency preparedness. Specifically, the OHEP should begin to work closely with Health Canada in three areas:

    a. Ensuring the relevance and readiness of any emergency stockpile system and of appropriate provincial linkages and protocols as required for the purposes of coordination.
    b. Developing the Health Emergency Response Team program.
    c. Harmonizing federal and provincial emergency preparedness and response capacities for public health emergencies.

23. The Ministry should move promptly to review and assess specific areas of emergency preparedness, and create action plans and recommendations through advisory committees with clinical and operational expertise. The key areas for review and assessment are:

    a. The development of emergency protocols for patient transfer, including an objective evaluation of the Patient Transfer Authorization Centre system.
    b. A review of the accuracy and utility of the CritiCall program. This should include an analysis of the role that the CritiCall Program and Central Bed and Resource Registry could play in the management of future outbreaks and the checks or mechanisms required to ensure data accuracy.
    c. The development of formal emergency protocols for rapid discharge of hospital Alternate Level of Care patients from hospital to

alternative sites, specifically long-term care facilities. This should include a review and analysis of the use of the category 1A crisis designation under the regulatory provisions governing the placement coordination system under long-term care legislation.

d. Provincial, regional, and institutional capacity to obtain and distribute supplies and equipment during infectious disease outbreaks and other public health emergencies.

The Ministry should report the results of the review and present the accompanying action plans to the Minister by March 1, 2004.

24. Once the OHEP is established, it should have a dedicated website to raise public awareness and promote the transparency of the Ministry's preparedness activities. The OHEP should use this website to post reference documents, appropriate contingency plans, and promotional materials concerning Ministry and health sector emergency preparedness. Until the OHEP is fully operational, the Ministry should immediately post all contingency plans on the Ministry website.

25. The Ministry, and with the OHEP in a coordinating and monitoring role once it is established, should immediately update and test a generic plan or standard operating protocol for the provincial response to infectious disease outbreaks and public health emergencies, including bioterrorism. This plan should be complete by June 2004 and should be posted on the OHEP or Ministry website as soon as it is complete. As an interim measure, the Ministry should post on its website a summary of the main roles and responsibilities of government and independent organizations in planning and responding to public health emergencies by February 1, 2004.

26. The Ministry, and with the OHEP in a coordinating and monitoring role once it is established, should broadly disseminate contingency plans for pandemic influenza and smallpox by March 15, 2004. These plans should be posted on the Ministry website.

27. a. The Ministry, together with professional associations, regulatory colleges, and the OHEP in a coordinating and monitoring role once established, should continue to develop provincial registries to provide rapid deployment of healthcare personnel. An action plan for developing these registries should be presented to the Minister by February 1, 2004. Registries should be tested and evaluated within 12 months of their inception.

b. The Ministry should initiate the ongoing development of cross-jurisdictional mutual aid agreements with other provinces and territories that provide for appropriate health human resources

deployment, inter-jurisdictional licensing of professionals, compensation and remuneration agreements, and provision of supplies and equipment. The Ministry should provide a status report on this review by April 1, 2004.

28. The Ministry, in conjunction with the Ontario Hospital Association (OHA), Canadian Hospital Association (CHA), and other appropriate organizations, should immediately examine the development of a specific code for Infectious Disease Outbreaks. Ideally, this code would be adopted nationally and be reflected in appropriate contingency planning at the provincial and federal levels.

29. The Ministry, along with the Ministry of the Attorney General and other appropriate Ministries, should conduct a thorough review of existing emergency powers and related legislation with a view to establishing a graduated system for responding to health emergencies. A status report on this review should be submitted to the Minister of Health and Long-Term Care and the Minister of Community Safety and Correctional Services by March 1, 2004.

As a second phase, the Ministry and the federal government should work together to ensure harmonization of emergency powers legislation by October 2004.

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