Position Paper on Healthcare Facility and Agency Disaster Preparedness in Canada

Abstract

Despite evidence to the contrary, it is widely perceived that Canada's healthcare disaster readiness is well developed, while in fact we remain dangerously unprepared. Unless all levels of government acknowledge the existing readiness gaps and begin to actively engage front line clinical care groups in remedying them, it will be difficult to defend the unnecessary suffering and loss of life that will occur.

Background

Hurricane Katrina arrived in New Orleans in 2005 killing over 1,800 people. Many of those deaths occurred well after the hurricane passed and the city was flooded. The system in New Orleans failed not because of front line clinical deficiencies but because of broader infrastructure and organizational deficiencies. Should a disaster of sufficient magnitude impact a Canadian community we might find ourselves in the same position as New Orleans because, while health care providers understand the medical issues, the front line organizational infrastructure has been neglected and remains disconnected from health system response.

Any discussion about the preparedness of the medical community in Canada for a disaster must acknowledge certain facts:

- Disasters are not rare but are episodic with an unpredictable and immeasurable periodicity,
- While an individual disaster may be unpredictable the response to disasters is not,
- There is a lack of clarity around who bears responsibility to ensure that the health response to disasters occurs in a way that the best health care possible is delivered to the greatest number of people possible in a consistent manner, even in an environment with diverse jurisdictional boundaries,
- Coordination and planning are essential, particularly for vulnerable segments of the population such as children, women, the elderly and those with special needs,
- The needs of the medical community in preparing for and responding to a health disaster are varied and not always understood by professional disaster managers (federally or provincially) or by other non-clinical responders.

Disaster as disease

Disasters can be considered diseases in the sense that they occur periodically, threaten the health of communities and individuals, have a broadly predictable pattern of behaviour and pathology, and can be planned for and mitigated against. Despite this disasters are the only disease entity where there is no established standard of care. The argument for this has always been that disasters are very diverse and unpredictable; however this argument does not hold. While the specific details of a disaster may be unpredictable the details of the healthcare response is not. For example, it is eminently predictable that;

- disasters will occur,
- there will be a surge of demand on the healthcare system,

- certain patterns of illness and injury will occur over specific time frames,
- specific resources of the healthcare system will be required in specific time frames,
- the skill set required in responding to a healthcare disaster is different from the skill required to deliver day-to-day care,
- specific problems (that often can be anticipated in advance) will obstruct the delivery of healthcare in a disaster, and
- while all healthcare disasters will have an impact on the health and well-being of the population, that impact can be minimized by proactively and systematically engaging all professional societies, NGOs and community-based groups and methodically going through the steps leading to preparedness.

Since more is predictable about a healthcare disaster than is unknown and since the response to disaster in the healthcare environment differs dramatically from routine function, it is not reasonable to assume that we will be adequately prepared by adapting our everyday skills and practices.

Who is in charge?

The lack of clarity over who is responsible for what, in preparing for and responding to a health disaster is an impediment to solving this problem. In Canada, overall disaster preparedness and response from a federal government perspective is assigned to Public Safety Canada (PSC) an organization that is both knowledgeable and with a culture that is focused on disaster readiness. However PSC is an organization wherein health care expertise is lacking. As such it is limited in its ability to support the health care system to prepare for and mitigate disasters.

The converse situation occurs in the federal health portfolio (Health Canada and the Public Health Agency of Canada) where the organization is knowledgeable in issues of public health; however the ability to support or coordinate health care response is limited by capacity, the absence of a disaster preparedness culture and jurisdictional issues.

Finally, there is a discontinuity between the Federal and Provincial authorities. The provinces and territories (P/T) have primary responsibility for the actual delivery of health care and have individual health care provision and public health structures that vary by jurisdiction. As we have seen clearly during the Severe Acute Respiratory Syndrome (SARS) outbreak in 2003 and the recent influenza pandemic, there are many barriers to exchanging of critical data and personnel between jurisdictions both at the P/T level and federally during a disaster that affects more than one jurisdiction. In addition virtually all federal and P/T public health authorities are disconnected from the clinical provision of care during a disaster.

A consistent national disaster response is key to minimizing the impact of disasters on the health of Canadians regardless of where they live and key to this is coordinated leadership at the federal as well as P/T level. PHAC and Health Canada along with PSC are uniquely positioned to develop and implement broad standards in health response and cross-jurisdictional cooperation and communication. Specifically, in light of the federal government's unique position to be able to fill this role, we strongly believe the provincial responsibility for health

care delivery in no way absolves Ottawa of its responsibility to support and coordinate a national health disaster response.

Preparing the health care system to respond

There is an important difference between the delivery of medical care during a disaster, and the organizational preparedness for and response to disasters by the health sector. The healthcare system's expertise lies in the former and not the latter. As the threat of natural and man-made disasters continues to grow, health care institutions and authorities are expected to have the capacity and expertise to receive injured, infected and emotionally traumatized patients. These organizations are aware of the need for a disaster plan but have not had the benefit of practical guidelines or tools that are consistent across the country to prepare one, let alone prepare a standardized plan that would interface well with other regional authorities and healthcare facilities. The result is a system with a series of gaps and redundancies, a hodgepodge of incompatible plans and unshared resources, and systems that lack either standards or an effective interface with the broader local or national disaster response infrastructure.

In addition, there is no ownership for the teaching of disaster preparedness in the Canadian healthcare system. While healthcare is accredited through a voluntary accreditation process that is national (Accreditation Canada) the emergency preparedness standards are rudimentary and do not reflect the need for an individual facility or agency to connect to the broader health system. In addition, Accreditation Canada has no evidence-based tools to assess hospitals' disaster preparedness or to assist facilities or agencies in developing preparedness programs. Both the Defense Research and Development Canada – Centre for Security Science (DRDC CSS) and the Canadian Standards Association (CSA) have attempted to develop standards for healthcare facilities and disasters. Neither of these is a clinical organization and to date, neither has any evidence-based tools for the task. The CSA is trying to develop these from scratch while the DRDC paper is based on US documents that are outdated and not always applicable in a Canadian context.

Where training has occurred – for example for Chemical Biological Radio-Nuclear (CBRN) preparedness in Ontario and during the 2010 Olympics in British Columbia's Lower Mainland - there were no resources dedicated to the maintenance of competence. This is a substantial issue because of the large turnover of individuals working within the healthcare system.

The result is a system with a series of probable gaps and redundancies, potentially incompatible plans, unshared and potentially overbooked resources. It is a system without standards or an effective uniform interface within the broader national disaster response infrastructure.

This lack of preparedness is not due to the lack of tools for individual facilities or agencies but rather a lack of cohesive programs to ensure connectivity at many levels. Traditionally, disasters have been conceptualized as having pre-impact, impact, post-impact and recovery phases.[10, 11] The Canadian National Framework for Health Emergency Management similarly uses the terms pre-event, event and post-event.[7] Pre-event activities include risk assessments, mitigation and preparedness. Some tools have been developed to aid health care facilities in conducting their own risk and readiness assessments,[12]but despite the existence of a Canadian made tool for Health Care Facility Risk Assessment, there has been no standardized risk assessment performed for hospitals across the country.

A national “all hazards” health response plan could prove to be a valuable resource because it could be adapted by individual health care organizations and used as an organizational template to ensure efficient communication with stakeholders from every sector, including other local medical centres, relevant local/regional and provincial agencies, municipal agencies, public health local first responders (EMS, Fire, Police), rehabilitation facilities, and resource suppliers.

As clinicians who interact daily with Canadians in need of health services, we are acutely aware of the trust that they put in us as individuals and in the broader system of interconnected and interrelated agencies and institutions within which we work. When it comes to disasters, however, there is a disconnect between health care providers and that system. The absence of federal government leadership and guidance has resulted in a lack of standardized operating procedures, unclear lines of authority and uncertainty regarding key functional roles and responsibilities that must be executed during a disaster response.

Since most emergencies begin locally and response is typically borne from the bottom-up, it is critical that top-level planners can coordinate well with frontline responders. Frontline caregivers have identified deficiencies in multiple peer-reviewed research papers[13-16]. Neither Federal nor Provincial/Territorial authorities have addressed these difficulties. More so, in the planning stages, front line healthcare organizations have often been excluded from many federal, provincial and municipal preparedness initiatives, leaving them to plan for disasters in isolation.

Around the globe, the threat of natural, man-made and infectious disease disasters is increasing. Canada is not immune to such threats. Emergency health care is the bedrock of an all-hazards disaster response, so it is essential that hospitals become integrated into future preparedness programs. Minimal emergency preparedness standardization has created institutional variability among government and health care organizations, which will make hospital and multi-agency coordination difficult, if not impossible, during a crisis situation.

Unfortunately despite repeated calls in the literature, the availability and prominence of health disaster education continues to be limited in this country. Recent global events as well as SARS and pandemic H1N1 influenza in Canada highlighted that critical gaps continue to exist between clinical medicine, public health and emergency management professionals. Such gaps often become the source of confusion and frustration during a response; gaps that could potentially be reduced through improved partnerships, education, awareness and inter-professional relationships.

Recommendations

The committee comprised of members of a variety of organizations (see Committee Membership) believes that, should a disaster occur in or directly affect Canada, major gaps in health care delivery will occur that will stem more from the lack of overall awareness and readiness than from the lack of medical knowledge.

It is the opinion of the committee that all healthcare facilities (including hospitals & long-term care homes) and agencies (including public health, pre-hospital, patient transport & community

healthcare) should have a baseline level of competence in disaster preparedness. This competence includes (but is not limited to) incident command, triage, mass casualty events/mass gatherings, hazardous materials as well as a common terminology (including basic knowledge and procedures related to biological, chemical, radiological and nuclear events). Moreover, the planning needs to be high-concept, must include an all-hazards approach and must be integrated at all levels of the health system.

As such, the authors of this position paper believe there is a great need to have a coordinated Canada-wide program of health disaster preparedness so as to ensure the delivery of timely high quality health services to Canadian citizens in the event of a disaster. This should include ongoing disaster training and skill maintenance of all health care providers in Canada, whether they will be involved at the site of an event, in a community setting, in transit, at a receiving facility, or at a facility dedicated to long term care. Specifically, accrediting health care agencies should make disaster preparedness an accreditation requirement which is assessed using specific, measurable, and scientifically driven standards. Part of an assessment of readiness should include periodic exercises that involve all components of the disaster response and that are objectively assessed for purposes of quality improvement. The program should promote coordination of services and alignment of disaster response and continuity of operations plans among the various health providers and health system components within a community in order to ensure ongoing health protection and care to all citizens. It is important to stress that healthcare facilities and providers must also coordinate with emergency response services such as first responders, fire, police; as well as relevant government and local agencies involved in health emergencies. This coordination at the planning phase is essential, especially for vulnerable segments of the population such as children, the elderly and patients with special needs.

In order to ensure interoperability between regions and all levels of healthcare, the federal government must provide uniform planning tools and resources. Federal involvement in disaster response does not in any way impinge on provincial authority in the health care field. Instead it addresses the paramount issue of consistency among responders and shares resources across the country at an agency level, a healthcare facility level and at a healthcare professional level [such as the professional organizations for physicians, nurses etc.].

Ideally, federal health emergency management tools for health practitioners and organizations should include: a core set of concepts, principles, terminology, and technologies covering the incident command system; multi-agency coordination systems; unified command protocol; a training strategy; identification and management of resources; qualifications and certification; and tactics that support the collection, tracking, and reporting of incident information and incident resources.[18]

It is the opinion of the committee that any program designed to improve disaster preparedness among Canadian health care facilities and health care providers' will lead to increased emergency response confidence and effectiveness. This would allow the institutions and agencies to be able to prepare plans that:

- are uniform in format and structure allowing for mutual aid between local facilities and agencies as well as across and between regions and provinces/ territories
- coordinated with Provincial/Territorial & Federal initiatives and support

- are based on best practices, tested and exercised.

Finally it is the opinion of this committee that the Federal and Provincial/Territorial Governments must do more to promote health disaster preparedness across Canada, including providing the opportunity for health care providers, disaster responders and administrators to train and develop plans together, breaking down planning "silos" and leading to improved cooperation between them.

In order to achieve these goals Federal & Provincial/Territorial authorities need to provide health care facilities, agencies and disaster responders with the following:

- common resources for risk assessment, readiness assessment, planning and reporting
- common guidelines on which they can base their planning, with the resultant uniformity in disaster preparedness.
- common structure/ education models for maintenance of disaster preparedness competence for all responders/ care providers
- clarification of the division of authority between health care facilities, regional authorities, the Ministries of Health, the Public Health Agency of Canada and other Federal and Provincial/Territorial agencies
- common reporting, command and communications methodology between health care facilities, regional authorities, the Ministries of Health, the Public Health Agency of Canada and other Federal and Provincial/Territorial agencies

In addition the relevant professional colleges must support the development and delivery of professional education in disaster preparedness to trainees and to practicing professionals. While the training at the federal and provincial/territorial level should assist organizations in breaking down their inter-organizational silos, this training should also emphasize the breaking down planning and communication silos with in healthcare facilities (ex. Emergency clinicians should communicate with IT and facility managers to ensure roles and responsibilities are known prior to an emergency situation.)

Finally, there exists a need to cultivate new and support existing health-champions in disaster management in Canada – in line with what has been achieved in other countries. It will be these champions who will become the invaluable leaders within their professions as well as provide the necessary linkages to the multiple agencies that comprise community-based and academic disaster management.

In summary, despite evidence to the contrary, most authorities in Canada perceive our healthcare disaster readiness to be far more advanced than it is while in fact we remain dangerously unprepared. We believe that our own 'Hurricane Katrina' moment is inevitable unless all levels of government acknowledge these gaps and begin to actively engage front line clinical care groups (including national associations as well as P/T level clinical organizations) in remedying this. Having been made aware of these gaps, it will be difficult to defend the unnecessary suffering and loss of life that will occur without this engagement.

The drafting committee is comprised of members of:

The British Columbia Centre for Disease Control (BC CDC)
The Canadian Association of Emergency Physicians, (CAEP)
The Centre for Excellence in Emergency Preparedness (CEEP)
The National Emergency Nurses Affiliation (NENA)
Public Health Ontario (PHO)
National Association of EMS Physicians (NAEMSP)
Canadian College of Family Physicians (CCFP)
World Association of Disaster & Emergency Medicine (WADEM)
Society of Rural Physicians of Canada
International Association of Emergency Managers (IAEM)

The committee was multidisciplinary (including both health care and non-health care experts), academically and politically independent and members have, in the past, provided consultation, education, research and resources in both Canada and abroad. None of the committee members declared a conflict of interest.

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