Community

Improving Collaboration in Times of Crisis:

Integrating Physicians in Disaster Preparedness and Health Emergency Management

A Policy Paper by BC's Doctors
November 2018

doctors of bc
Better. Together.

The Doctors of BC Council on Health Promotion (COHP) reviews and formulates policy through the use of project-oriented groups of practising physicians and professional staff.

Integrating Physicians in Health Emergency Management Project Group

Dr Chris Rumball, Chair – Emergency Medicine, Nanaimo
Dr Joseph Copeland – Emergency Medicine, Vancouver
Dr Graham Dodd – General Practice, Kamloops
Dr Ian Gillespie – Psychiatry, Victoria
Dr Heather Smith – General Practice, Prince George
Dr John Soles - General Practice, Clearwater
Ms Heleen Sandvik, Consultant, Vancouver

Doctors of BC Council on Health Promotion (COHP) Membership 2017-2018

Dr Ian Gillespie, Chair – Psychiatry, Victoria
Dr Kathleen Cadenhead – General Practice, Vancouver
Dr Colleen Dy – Obstetrics, North Vancouver
Dr Jean Flanagan – General Practice, Vernon
Dr Romayne E. Gallagher – Geriatrics, Vancouver
Dr Tommy Gerschman – Pediatrics, West Vancouver
Dr Jesse Kancir – Public Health and Preventive Medicine, Vancouver
Dr Charuka Maheswaran – General Practice, Courtenay
Dr Lloyd Oppel – Emergency Medicine, Vancouver
Dr Chris Rumball – Emergency Medicine, Nanaimo
Dr Helena Swinkels – Public Health and Preventive Medicine, Vancouver
Dr Shirley Sze – General Practice, Kamloops

Doctors of BC Staff Support

Mr Jim Aikman – Executive Director of Economics and Policy Analysis
Ms Deborah Viccars – Director of Policy
Ms Helen Thi – Senior Policy Analyst
Ms Katie Bowers – Policy Analyst
Mr Jorgen Harink – Policy Analyst
Ms Brenda Hodgson – Senior Administrative Assistant

TABLE OF CONTENTS

EXECUTIVE SUMMARY

No area in British Columbia is immune from hazards.[1] Hazards are potentially damaging physical events that can be natural or human-induced and can lead to the loss of life or injury, property damage, social and economic disruption, or environmental degradation.[2]

These events, such as earthquakes, wildfires, pandemics, and other mass casualty incidents, can strike at any time. With little or no warning, they can overwhelm a community's ability to cope, causing serious harm to people's safety, health, and welfare.

Emergency management is the administration of activities and risk management measures related to hazards, including areas such as prevention and mitigation, preparedness, response, and recovery. There is an opportunity to integrate physicians in all aspects of health emergency management to build a strong medical team that can adequately and appropriately respond to the health needs of individuals and communities during and after an emergency.

The key to having an effective medical response during these events is ensuring that the health care system is well prepared in advance. This includes ensuring health care providers themselves are prepared, by supporting them to develop household and business continuity plans, and to participate in health emergency management planning. To support physicians in emergency preparedness, Doctors of BC commits to promoting practical resources and tools to help physicians better prepare for and respond to emergencies.

Physicians and other health care providers play a critical role in savings lives and reducing health-related harms when disasters strike. While existing provincial emergency response frameworks discuss the roles of some physicians, such as medical health officers, such frameworks do not reference the roles of all physicians and other health care providers prior to, during, and following emergencies. To ensure health care services continue in the days and weeks following an event, Doctors of BC recommends the BC government and regional and community partners provide physicians and other health care providers with meaningful opportunities to participate in health emergency management planning. This includes providing physicians with clinical leadership opportunities at the community, regional, and/or provincial levels.

Building capacity in health emergency management is also critical to support physicians to participate in emergency planning. As such, Doctors of BC commits to raising physician awareness of regional, provincial, and national training and leadership opportunities in health emergency management, including those provided by Health Emergency Management BC.

There is an opportunity to strengthen relationships between the medical community and emergency management planners at all levels to ensure seamless delivery of information and coordination of health care services during an emergency. Doctors of BC is committed to working with the Government of British Columbia, including Health Emergency Management BC, health authorities, and community partners to improve emergency management planning in British Columbia. Together, we can reduce the health-related harms from hazards and help communities build capacity to create resilient, sustainable futures.

DOCTORS OF BC POLICY

Doctors of BC believes that physicians, working with governments and other partners, play crucial roles in health emergency management and recognizes opportunities for improved integration of both community and facility-based physicians in health emergency management activities.

To support this policy, Doctors of BC has identified the following commitments and recommendations.

Commitments

Doctors of BC commits to:

a. Engaging physicians and collaborating with the Government of BC, including Health Emergency Management BC, health authorities, and other community partners to improve physician involvement in health emergency management planning in British Columbia.

b. Raising physician awareness of community, provincial, and national training and leadership opportunities in health emergency management.

c. Promoting practical resources and tools to help physicians better prepare for and respond to emergencies and support their patients in their own preparation and response.

d. Working with continuing medical education organizations to promote training in emergency preparedness planning for physicians.

Recommendations

a. The Government of BC, working with stakeholders and ensuring meaningful input from physicians and other health care providers, develop a provincial health emergency framework that:

- Clarifies how the health sector, including primary and community care, fits within the context of the BC emergency management system.
- Discusses the roles of health agencies and health care providers in health emergency management, including prevention, preparedness, response, and recovery.
- Includes in its communication strategy, multiple information and communication methods to reach all health care providers in a timely manner during emergencies.
- Ensures the unique needs of vulnerable populations and those experiencing health inequities are specifically addressed in local, regional, and provincial health emergency response plans.

b. All provincial, regional, and community partners engaged in emergency management provide physicians with meaningful opportunities to both participate in health emergency management planning and to provide clinical leadership at the local, regional, and/or provincial levels.

INTRODUCTION

In Canada, supports and planning for protection from possible health risks stemming from natural disasters, infectious diseases, and accidents or criminal acts are provided at the federal*, provincial, territorial, regional, and municipal levels.

Most emergencies are local in nature and managed by municipalities or by government response agencies at the provincial or territorial level.[2] Accumulating risks associated with factors such as globalization, increased urbanization, terrorism, climate change, and transmission of animal and human diseases have not only increased the potential for various types of catastrophes but also the severity of these incidents.[2]

Emergency management in Canada is guided by an all-hazards approach. Hazards are sources of potential harm or loss and can include both natural and human-induced disasters. Emergencies and disasters result when a hazard intersects with a community leading to serious and adverse consequences that may, for an undetermined period of time, exceed the ability of a community to cope.[2] The goals of emergency management are to save lives, ensure the health and safety of responders, reduce suffering, protect public health, protect infrastructure, property, and the environment, and reduce economic and social losses.[1]

Similar to other regions across Canada, BC is prone to many weather-related hazards, such as flooding, landslides, avalanches, wildfires, and other severe weather. Being a coastal province located in the Cascadia Subduction Zone, BC is also particularly vulnerable to earthquakes, tsunamis, and storm surges. A 2013 study conducted by the Insurance Bureau of Canada reports that the estimated cost of a large earthquake off the coast of BC would be as high as $75 billion in property, infrastructure, and public asset loss.[3] This figure does not include the short- and long-term health costs associated with such a catastrophe.

In BC, the Emergency Program Act and associated regulations govern emergency management. The Emergency Program Management Regulation outlines the responsibilities of government ministries, Crown corporations, and other public agencies during an emergency. As many hazards can lead to serious public health consequences such as contamination of food and water, poor air quality, disruption of critical health services, and negative impacts on mental health and wellness, ensuring that the health sector is actively involved in emergency management is critical. In BC, the Ministry of Health is responsible for leading the technical response to disease outbreaks and hazardous material spills. During an emergency, the Ministry of Health and health authorities are responsible for ensuring continuous provision of health care services.

* This includes the Health Council of Canada, the Canadian Institute for Health Information, the Institute for Healthcare Improvement, the Canadian Foundation for Healthcare Improvement, and Accreditation Canada.

TOP 10 HAZARDS IN BC:

EARTHQUAKES

TSUNAMIS

FLOODS

LANDSLIDES

AVALANCHES

SEVERE WEATHER

POWER OUTAGES

HAZARDOUS MATERIAL SPILLS

WILDFIRES

DISEASE OUTBREAKS

Source: Government of BC, Public Safety & Emergency Services Available at: www2.gov.bc.ca/gov/content/safety/emergency-preparedness-response-recovery/preparedbc/know-the-risks

Health Emergency Management BC (HEMBC), a program of the Provincial Health Services Authority (PHSA), provides emergency management leadership and support across the BC health system. Created in 2013, HEMBC provides expertise, education, tools, and support for the BC health authorities and the Ministry of Health to effectively mitigate, prepare for, respond to, and recover from the impacts of emergency events while ensuring the continuity of health services.

In BC, the Health Authorities Act explicitly defines the role of all health care services required during disasters, except for services provided by physicians and the BC Ambulance Service. The Public Health Act provides the Minister of Health, public health officials, regional health authorities, local governments, and others with important tools such as up-to-date information gathering abilities, modern inspection and ordering abilities and measures necessary to respond to public health emergencies. The Public Health Act also outlines the powers and duties of public health officials, including the provincial health officer, medical health officers, and environmental health officers for communicable disease prevention and control, environmental health hazard response, chronic disease and hazard prevention, and public health emergency response. Beyond the Public Health Act, there is no provincial framework outlining the roles of facility and community-based physicians during and following emergencies. Additionally, there are no provisions for physician input into health emergency planning at the provincial, regional, or community level.

KEY TERMS

Disaster: A social phenomenon that results when a hazard intersects with a community in a way that exceeds or overwhelms the community's ability to cope and may cause serious harm to the safety, health, welfare, property or environment of people. It may be triggered by a naturally occurring phenomenon which has its origins within the geophysical or biological environment or by human action or error, whether malicious or unintentional, including technological failures, accidents, and terrorist acts.

Emergency: A present or imminent event that requires prompt coordination of actions concerning persons or property to protect the health, safety or welfare of people, or to limit damage to property or the environment.

Emergency management: The management of emergencies concerning all-hazards, including all activities and risk management measures related to prevention and mitigation, preparedness, response, and recovery.

Hazard: A potentially damaging physical event, phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.

Source: www.publicsafety.gc.ca/cnt/rsrcs/pblctns/mrgnc-mngmnt-frmwrk/mrgnc-mngmnt-frmwrk-eng.pdf

POLICY OPPORTUNITIES

Clarifying physicians' roles in health emergency management

Physicians play a critical role in savings lives and reducing health-related harms when disasters strike. They also play a key role in delivering continuity of care following an emergency. The *Provincial Public Health and Medical Services Annex* (the "*Annex*") report outlines how the BC health system will respond to major emergencies or disaster events.[4] While the *Annex* describes the roles and responsibilities of the Ministry of Health, regional health authorities, agencies under the PHSA, and medical health officers during an emergency, it does not discuss the roles of general practitioners, specialist physicians, or other health care providers working in hospitals or in the community.

Medical health officers and public health physicians play important roles, including delivering messaging related to major disease outbreaks or emergencies impacting the province, disease surveillance, and other public health measures such as public education and issuing travel restrictions. In addition to these roles, it is important to consider the roles of physicians and other health care providers more broadly in health emergency management.

There is an opportunity to explore these roles at both the individual and collective levels to support the ongoing delivery of health care services during and following an emergency. As discussions related to these roles need to take place at the planning stage, it is important that physicians are provided with meaningful opportunities to participate in health emergency management planning and coordination. Practising physicians can provide medical expertise and clinical perspectives to assist in planning an effective and efficient medical response to emergencies.

As the type and scale of emergencies vary considerably, it is likely that the roles of physicians will differ depending on specialty and type of event. When a disaster strikes, facility-based physicians play a large role in ensuring continuity of care for existing patients at their facility. They will also need to manage increased demand for services and appropriately triage, as new patients arrive requiring urgent care. Facility-based physicians also have a role in ensuring they understand and follow their site's emergency plans and protocols.

During an emergency, it is vital that health care services are not only available at the facility level, but are also at the community level. Physicians based in the community play an important role in health emergency management. By remaining in the community, they can triage and provide nonemergency care outside the hospital during and after emergencies. Additionally, community-based physicians can identify patients and populations that may be particularly impacted or vulnerable during emergencies and encourage those patients to develop personal health emergency plans in advance, recognizing the additional challenges they may face with preparation and response.

There are opportunities to explore how community-based physicians can also assist in providing temporary relief for health care providers working in facilities by acting as another wave of clinicians to step in and manage patients. This can help prevent provider burnout and allow providers an opportunity to look after their own personal and family matters to ensure there is sustained health care delivery in the days and weeks following an emergency.

In BC, the College of Physicians and Surgeons has the ability to undertake emergency registration to allow any physician holding a full license in another Canadian province to register and assist in the provision of health care services during a declared state of emergency. Additionally, the College can arrange to expedite Certificates of Professional Conduct and privileging to allow willing physicians to travel to and practise in the location of the emergency.

Working collaboratively to clarify physicians' roles in health emergency management will allow for emergency management planners to strengthen and build relationships with both facility and community-based physicians and key stakeholders in the health care sector. This will provide opportunities to discuss any issues that emerge, including issues related to physician credentialing, privileging, and scope of practice during a state of emergency.

Some countries have already extensively explored the roles of health care providers in health emergency management at both the individual and collective levels. The New Zealand Ministry of Health, in consultation with physicians and other key stakeholders, has developed a health emergency plan that specifically outlines the roles and responsibilities of all components of the health system before, during, and after an emergency.[5] A collaborative, consultative approach was taken throughout the development of the plan, including workshops with health emergency management stakeholders.[5] As part of their plan, health care providers, including those based in the community, have collaboratively identified roles and responsibilities across all components of emergency management, including:

- Plan for functioning during and after an emergency.
- Ensure capability for continuing to function to the fullest extent possible (albeit at a reduced level) during and after an emergency.
- Develop, review, and improve their emergency plans.
- Respond to the emergency as required.[5]

At a collective level, the American Medical Association's Code of Medical Ethics states physicians should provide medical expertise and work collaboratively with others to develop policies that are designed to improve the effectiveness and availability of medical services during a disaster, based on evidence and respect for patients.[6] Physicians should also advocate for and participate in ethically sound research to inform policy decisions in this area.[6]

By discussing the roles of health care providers in emergency management plans, a greater level of clarity regarding what response activities will look like in the event of an emergency can be achieved. There is an opportunity to work collaboratively to strengthen existing provincial and regional plans to clarify both facility and community-based physicians' roles in health emergency management in BC.

DOCTORS OF BC RECOMMENDS:

The Government of BC, working with stakeholders and ensuring meaningful input from physicians and other health care providers, develop a provincial health emergency framework that:

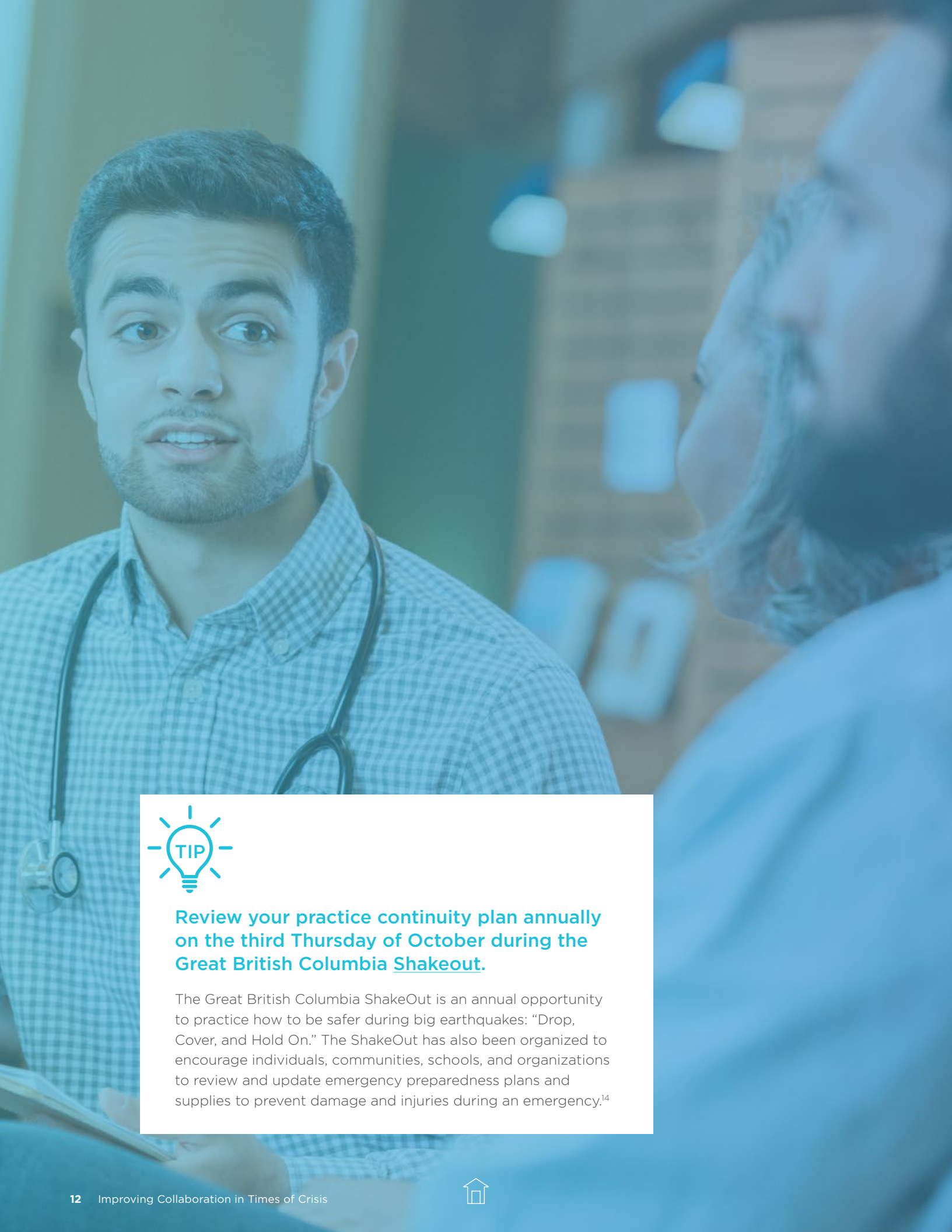
- ***Clarifies how the health sector, including primary and community care, fits within the context of the BC emergency management system.***
- ***Discusses the roles of health agencies and health care providers in health emergency management, including prevention, preparedness, response, and recovery.***

Integrating physicians in health emergency management

The Emergency Management Cycle

Emergency management activities can be divided into four phases: mitigation and prevention, preparedness, response, and recovery. Mitigation and prevention activities reduce risk prior to an emergency. Preparedness also occurs before an emergency, but seeks to ensure individuals and organizations are able to survive and respond to a disaster. Any activities that manage the immediate impacts of an emergency, either during or immediately following a disaster, are considered part of the response phase. Finally, the recovery phase begins after the immediate dangers posed by an emergency cease and works to restore a community to its previous state.

There are opportunities to better integrate physicians in activities related to all stages of the emergency management cycle to prepare and enable them to provide the best possible care prior to, during, and following emergencies. In the sections that follow, each stage of the emergency management cycle is briefly considered in terms of where good work has been done and where opportunities still exist.



TIP

Review your practice continuity plan annually on the third Thursday of October during the Great British Columbia Shakeout.

The Great British Columbia ShakeOut is an annual opportunity to practice how to be safer during big earthquakes: "Drop, Cover, and Hold On." The ShakeOut has also been organized to encourage individuals, communities, schools, and organizations to review and update emergency preparedness plans and supplies to prevent damage and injuries during an emergency.[14]

A. Prevention and Mitigation

Many public health interventions have been effective at preventing and mitigating large scale emergencies, particularly related to communicable diseases.[7] For instance, routine immunizations, handwashing education, safe food storage and preparation, and health inspections of food establishments play an important role in the prevention of communicable disease outbreaks.[7]

In 2013, the BC Ministry of Health undertook an evidence review of public health emergency management.[7] The review outlines practices that could potentially be implemented throughout the public health system in BC to improve public health emergency management. Additionally, the review identified that enhanced resilience is considered critical to mitigating vulnerabilities, reducing negative health consequences, rapidly restoring community functioning, as well as being important for limiting the need for prolonged assistance post-emergency.[7] Doctors of BC supports the public health work focused on enhancing community capacity and building community resilience to reduce the health impact of emergencies on British Columbians.

B. Planning and Preparedness

Despite mitigation and prevention efforts, emergencies will still occur. Planning is an integral part of the preparedness process and is necessary to reduce the health impacts resulting from an event. Having a plan in place is also key to ensuring an effective response and optimal recovery. Emergency preparedness planning should take place at individual, community, and health systems levels.

i. Planning and Preparedness at an Individual Level

At an individual level, all British Columbians should develop a personal or household plan to help cope with the stress and practical impacts of emergencies. The provincial government, through PreparedBC, provides emergency preparedness information and offers tips on getting prepared, including preparedness guides and information related to developing household emergency plans.[8] For physicians, having a household emergency plan helps ensure they are able to check in with their families and feel assured that they are safe before assisting with the medical response during an event.

ii. Planning and Preparedness at a Community Level

As many physicians work in the community, supporting them to develop medical office emergency plans is key to ensuring continuity of health care services at a community level during an emergency. Planning ahead and building resiliency before an emergency allows physicians to get their clinics to an operational level sooner and allows them to continue caring for patients during an event.[5] As part of the planning process, it is beneficial to ensure physicians anticipate the needs of their existing patient populations, but also be positioned to potentially broaden their services to provide care to new patients and families during and following an emergency. Planning also provides an opportunity for physicians to establish awareness of the types of physical and mental health impacts that can result from various hazards.

In addition to supporting clinics to develop business continuity plans, it is important to encourage and support community-level coordination among health care providers. Some physician groups in BC have prioritized planning and preparedness and begun working towards preparing physicians in their communities for emergencies. For example, both the Comox and Victoria Divisions of Family Practice have initiated emergency management projects.

The Comox Division of Family Practice has partnered with the Comox Valley Emergency Preparedness Program and other key stakeholders to develop a coordinated emergency response plan. The main outcome of this project was the establishment of five designated disaster first aid stations at existing health clinics that can be activated during or following a disaster. The Comox Valley Division of Family Practice is also developing a plan to engage physicians who do not have hospital privileges, and develop their capacity to provide emergency health services from their own practices or temporary emergency locations.[9]

The Victoria Division of Family Practice in partnership with the BC Ministry of Health Emergency Management Unit has developed two tools to help physicians: a practice continuity guide and a practice continuity workbook.[10, 11] These tools are designed to assist physicians in developing business continuity plans that will allow physicians and their staff to return to work safely and efficiently following an emergency.

The community of Nanaimo has also initiated projects to improve emergency preparedness for health care providers. One project has focused on engaging local family physicians and their clinics to develop both household emergency plans and business continuity plans. Education and training have also been provided to help prepare clinic staff for an emergency, plan for sharing practice space between clinics if necessary, understand billing procedures and strategies, and respond to Nanaimo's four local emergency shelters if requested. Additionally, Nanaimo Regional General Hospital has utilized the BC Mobile Medical Unit (MMU) to conduct an applied disaster medicine course, which provides customized education and simulation disaster exercises for clinicians. For two days in June 2018, the MMU was set up outside of Nanaimo Regional General Hospital to provide training to physicians, nurses, unit clerks, and social workers, without disrupting the emergency department or hospital operations.

DIVISIONS OF FAMILY PRACTICE

Divisions of Family Practice are community-based groups of family physicians working together to achieve common health care goals. The Divisions of Family Practice initiative is sponsored by the General Practice Services Committee, a joint committee of the BC Ministry of Health and Doctors of BC. The initiative was designed to improve patient care, increase family physicians' influence on health care delivery and policy, and provide professional satisfaction for physicians. There are currently 35 Divisions of Family Practice in BC that encompass more than 230 communities.

Practice Continuity Guide for Family Physicians: Is Your Practice Prepared for a Disaster?

Victoria Division of Family Practice

How would your family practice continue to offer care for your patients if there were a disaster in your building, your neighbourhood, or your region? Consider the following possibilities if your practice is directly affected because:

- A fire in your building destroys all your equipment and files, and you now need to find a new office.
- Your electronic medical records (EMR) are compromised and the backup is unusable or out of date.
- An earthquake shakes your community, affecting your patients, practice, community, and home.

A business continuity plan provides you with the information you will need to take care of your staff, to reopen your office, and to get back to helping your patients as soon as possible.[10]

THE BC MOBILE MEDICAL UNIT: A HIGH-TECH HOSPITAL ON WHEELS

The BC Mobile Medical Unit (MMU) originally provided critical and surgical care capability in the Whistler Athletes Village during the 2010 Olympic and Paralympic Winter Games.[12] The MMU is currently operated by the Provincial Health Services Authority and its team and hospital trailer are kept in a state of clinical and operational readiness in the event of a natural disaster or unplanned emergency. Additionally, the MMU can provide additional clinical space for a BC health care facility that is undergoing renovations, provide public health outreach, support special events occurring in the province, and provide customized education for health care providers.[13]

Photo credit: BC Mobile Medical Unit

iii. Planning and Preparedness at a Systems Level

At a systems level, a key element of medical preparedness is ensuring there is coordination between care providers and emergency management planners. Developing strong relationships prior to an emergency can help prioritize and address gaps through planning, training, exercising, and managing resources.[15]

A discussion paper by the College of Family Physicians of Canada on the role of family doctors in emergency preparedness highlights the central and critical role family physicians play in community health care. The paper also highlights that family physicians are often frustrated in their roles and responsibilities because of inadequate connectivity to other parts of the system and insufficient supports in the delivery of care.[16] Engaging community-based care providers early in the planning process can help build better relationships between the health care community and local and regional emergency response teams.

The BC Ministry of Health has recognized that cross-sector, integrated emergency management planning is critical to success.[7] This includes working collaboratively across government ministries and with the health care sector. There remains an opportunity in BC to fully engage interested clinicians, including those based in the community, early in the emergency management planning process to foster collaborative relationships. This will contribute to a more coordinated health system response and better health outcomes when responding to and recovering from emergencies.

Consultation with stakeholders during the development of this policy paper highlighted the issue of maintaining essential medications throughout the province prior to and during emergencies. Health care providers and patients should feel confident that life-sustaining medications will be maintained and accessible during emergencies. These issues highlight the importance of engaging community-based allied health providers, including pharmacists, pharmacy technicians, nurses and nurse practitioners, to ensure a more coordinated approach to emergency management planning.

Existing community-based organizations, including the divisions of family practice, as well as emerging structures, such as primary care networks, may provide a foundation for supporting physicians and health care providers to engage in health emergency planning. In particular, increased coordination and collaboration with these structures can lead to better integration of community-based health care providers in emergency planning and preparedness activities.
Consultation with stakeholders in emergency management reveal that inadequate funding and compensation is a barrier to physician participation in broader preparedness and planning. Recognizing this, sustainable compensation mechanisms should also be considered and established in order to support physicians to allocate time to participate in this important work.

DOCTORS OF BC RECOMMENDS:

- ***All provincial, regional, and community partners engaged in emergency management provide physicians with meaningful opportunities to both participate in health emergency management planning and to provide clinical leadership at the local, regional, and/or provincial levels.***

DOCTORS OF BC COMMITS TO:

- ***Engaging physicians and collaborating with the Government of BC, including Health Emergency Management BC, health authorities, and other community partners to improve physician involvement in health emergency management planning in British Columbia.***


EMERGENCY
EXIT
ONLY
CAUTION
WATCH YOUR
STEP
3
Vernacare E Class

Photo credit: BC Mobile Medical Unit

iv. Building Physician Capacity in Health Emergency Management

While physicians play a critical role in health emergency management, disaster medicine receives little attention during medical training in Canada.[17, 18] To support physicians to participate in emergency preparedness planning at all levels, it is important to build their capacity in health emergency management through ongoing professional development, training, and education. Building physician capacity may encourage physicians to become champions in health emergency management in their local communities, support others to become involved, and increase community preparedness.

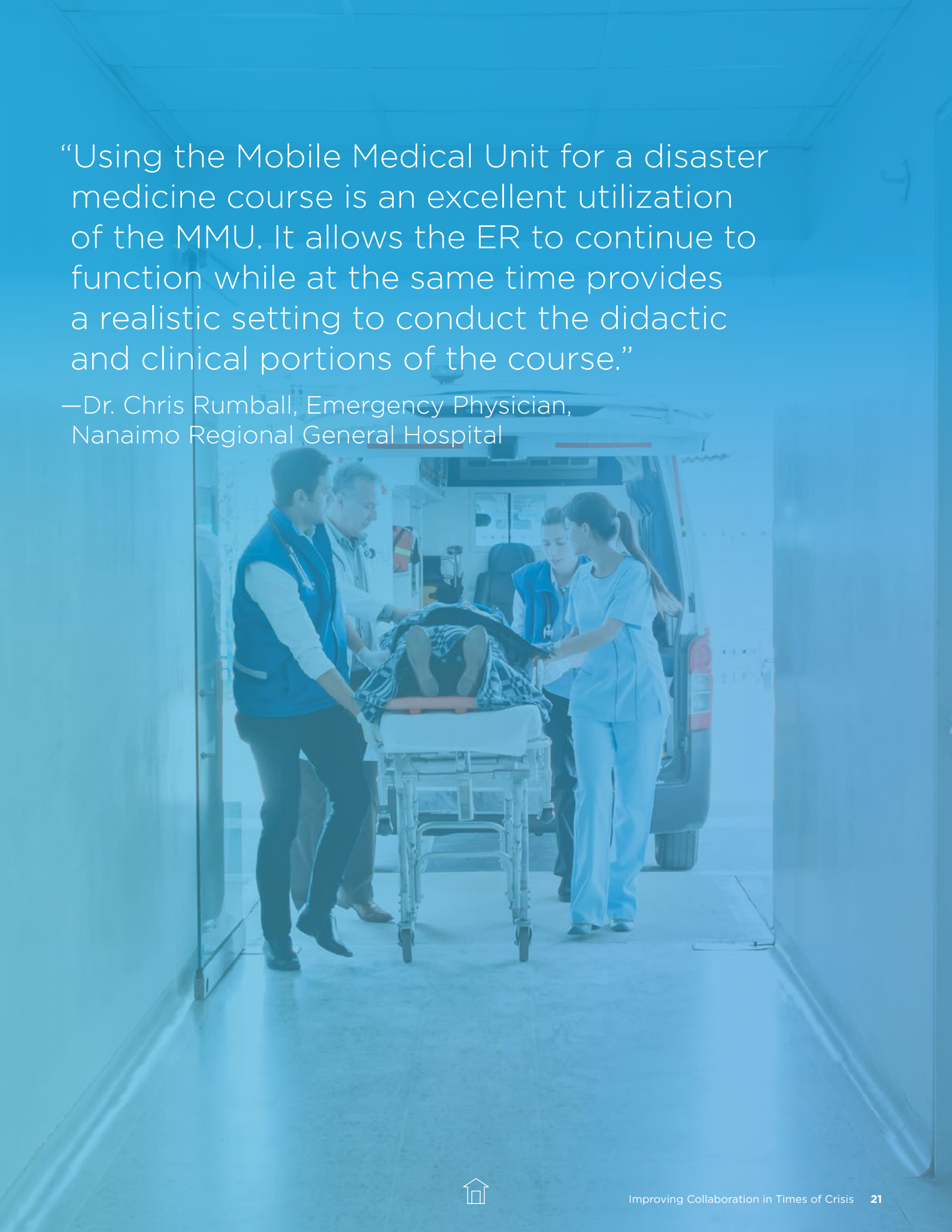
HEMBC staff have done considerable and commendable work across the province to support a range of activities, including: development of emergency plans, training and education, emergency exercises, emergency response, recovery, as well as after action/ lessons learned processes. Doctors of BC appreciates the interdisciplinary approach taken by HEMBC in its delivery of health emergency management activities and commits to ensuring physicians and health care providers are aware of and positioned to participate in these activities.

DOCTORS OF BC COMMITS TO:

- *Raising physician awareness of community, provincial, and national training and leadership opportunities in health emergency management.*
- *Promoting practical resources and tools to help physicians better prepare for and respond to emergencies and support their patients in their own preparation and response.*
- *Working with continuing medical education organizations to promote training in emergency preparedness planning for physicians.*

"Using the Mobile Medical Unit for a disaster medicine course is an excellent utilization of the MMU. It allows the ER to continue to function while at the same time provides a realistic setting to conduct the didactic and clinical portions of the course."

—Dr. Chris Rumball, Emergency Physician, Nanaimo Regional General Hospital



C. Responding during an Emergency

During an emergency, the objective of the health care sector is to provide health services to minimize the impacts of the emergency on the health of individuals and the community.[5,15] In order to participate in the broader medical response, physicians need to receive information in a timely and reliable way. Establishing strong communication channels for sharing information is critical to an effective and efficient response.[19, 20] This includes fostering partnerships and collaboration between centralized emergency management structures and health services in advance so that there is a mechanism in place for communication and information exchange between government organizations, health care providers, and other responders during an emergency.

Discussions with physicians directly impacted by the 2017 summer wildfire evacuations reveal that overall communication during and following the evacuation process was considered both a success and a challenge. On the one hand, advancements in technology and communication allowed for enhanced communication methods, contributing to the success of health care providers being kept apprised of important information during the state of emergency. For the most part, physicians were able to remain informed via regular email communication, and in urgent cases, through text messaging and phone calls. This proved to be effective for many physicians working in rural communities who were on evacuation alert and who were later asked to evacuate. Social media has also allowed for increased information sharing across larger populations and the public.

Despite the benefit of technology to aid communication, not all physicians felt that communication was effective during the 2017 BC wildfires. Community-based physicians and those providing patient care in remote areas received information sporadically, and often received important information via word of mouth from first responders or through social media. Research shows that developing liaison roles can be valuable for facilitating communication and enhancing direct contact between emergency response agencies and health care providers.[19] In rural and remote areas, consideration should be given to developing this type of liaison role to better connect health authority administrators and health care practitioners providing care in remote communities to ensure they receive timely information and appropriate resources.

There is an opportunity to strengthen existing health emergency response structures in BC to reflects changes in the health care system, including supporting organizations such as the divisions of family practice and medical staff associations to participate in health emergency management activities. In BC, the divisions of family practice have built strong relationships with community-based physicians and are well positioned to play an important role in supporting physician engagement and assisting in information sharing during an emergency.

There is also an opportunity to enhance coordination among emergency response agencies, health authority administrators, and those providing care to patients to streamline information and improve communication to all heath care providers responding to emergencies. This includes exploring various communication channels to see what is most effective at delivering important information to facility and community-based health care providers, and ensuring there is built-in redundancy in communication efforts.

DOCTORS OF BC RECOMMENDS:

- ***The Government of BC, working with stakeholders and ensuring meaningful input from physicians and other health care providers, develop a provincial health emergency framework that includes in its communication strategy, multiple information and communication methods to reach all health care providers in a timely manner during emergencies.***

Photo provided by Dr Robert Coetzee and Patrice Gordon

COLLABORATION IN TIMES OF CRISIS

During the BC wildfires of 2017, Dr. Robert Coetzee and his wife Patrice Gordon, a family physician and nurse practitioner duo working in the Cariboo Chilcotin region, continued to provide care to eight remote and isolated communities spread across 350km of rugged, rocky terrain. While Robert and Patrice have previously worked in challenging international environments, including Afghanistan, Bangladesh, Nepal, and many war-torn African countries, neither anticipated that in their own community, they would have to face a state of emergency that would lead to immense challenges in connecting people with basic health care and lifesaving prescription medications. Road closures due to spreading wildfires meant that the usual methods of accessing prescription medications were no longer a viable option for weeks on end.

Knowing their patients were running low on medications that they could not go without, such as insulin, cardiac medications, and anticoagulants, Patrice and Robert sprang into action. Patrice first started by connecting with people in the communities to identify a contact person and to put together a list of medications and supplies needed. They then found pharmacists in Vancouver, Prince George, and Williams Lake who were willing to go the extra mile to assist. During the Williams Lake evacuation, the Vancouver pharmacy packaged and delivered medications and supplies to the airport in Vancouver to be flown to Anahim Lake, where the RCMP assisted in a relay delivery along Highway 20, involving detailed coordination, including passes for Patrice and Robert to drive through evacuated areas.

When all flights to the Chilcotin region were canceled and roads closed due to the fires, a special military helicopter was organized to make drops in isolated communities. A variety of communication modalities were used to communicate and connect with patients, including VHF radio, email, and telephone. At one point, Patrice rode her horse through smoky single-track forest to check on a patient who lives off-grid and was otherwise not accessible.

By taking initiative and working collaboratively with communities, the Interior Health Authority, First Nations Health Authority, RCMP, and pharmacists around the province, families received their life saving medications and other essentials, including baby formula, diapers, and ostomy supplies, during one of the worst wildfire seasons in the province's recorded history.

D. Recovering from Emergencies

While post-incident response may seem most significant in terms of the emergency management cycle, recovery following a response can be most challenging, given the already depleted physical, mental, and emotional state of those impacted by the emergency. Supporting the emotional, social, and physical well-being of individuals and communities is an important aspect of recovering from emergencies.[5] As such, it is important to consider the immediate and long term psychosocial effects of these events when examining the health and resilience of communities. Emergencies may cause post-traumatic stress symptoms and full syndrome disorder, depression, and anxiety in patients, first responders, and health care providers.[21]

The following examples illustrate various health impacts from emergencies:

- A study examining the health impacts of evacuated workers from the 2016 Fort McMurray wildfire in Alberta suggests that those who had been evacuated during the fire had significantly higher anxiety and depression scores.[22] Additionally, anxiety and depression scores among women were higher compared to men and often associated with financial loss from lack of work.[22] There is an opportunity for physicians to track the physical and mental health effects of emergencies on patients and provide appropriate referrals to additional resources.

- Intense and long durations of a state of emergency may also lead to provider fatigue, stress, and burnout. In April 2016, BC's provincial health officer declared a public health emergency to respond to the increase in drug overdose deaths across the province. Illicit opioids, and in particular fentanyl, had claimed the lives of more than 2000 British Columbians in the last two years.[24] A progress update on BC's response to the illicit opioid overdose epidemic by the Ministry of Mental Health and Addictions highlighted that many community organization volunteers and front-line workers were (and continue to be) experiencing significant trauma, burnout, and stress.[25]

- A study of general practitioners' perspectives on the impact of the series of earthquakes in Canterbury New Zealand from 2010-2011 showed that GPs reported significantly increased workloads both during the disaster response phase and in the recovery period, which resulted in increased mental and physical fatigue.[26]

In BC, the Provincial Health Services Authority oversees the Disaster Psychosocial (DPS) Program, which develops and provides psychosocial strategies involving a continuum of supportive services, targeting both the public and responders who have been affected by an emergency or disaster.[23] The DPS Program includes the DPS Services Volunteer Network, comprised of registered clinicians from the BC Association of Social Workers, BC Psychological Association, BC Association of Clinical Counselors, BC Police Victim Services, Canadian Association of Spiritual Care, and Canadian Counselling and Psychotherapy. It is important to have disaster psychosocial supports in place, including psychological first aid programs, to ensure community resiliency. During the summer 2017 BC wildfires, the DPS Program deployed more than 30 volunteers and reached more than 2450 people with their services.

Funded by the Doctors of BC and the Ministry of Health, the **Physician Health Program** also offers confidential help, referrals and counselling for physical and mental health issues to support all BC physicians, medical students, and residents, as well as their partners and dependent children. Doctors of BC continues to support physicians to develop effective coping strategies when managing increased workloads and to seek assistance when required, including accessing the services offered by the Physician Heath Program.

Protecting all Populations

Some populations have special needs that may be magnified during emergencies. The World Health Organization acknowledges that children, pregnant women, older adults, malnourished people, and people who are ill or have compromised immune systems are particularly vulnerable during emergencies and take a relatively high share of the disease burden associated with these events.[27]

Other populations, such as people with language barriers, those living with disabilities, those with mental illness or substance use disorders, and those living in poverty are also at a disadvantage during an emergency and require additional supports to safeguard their health and well-being during and following emergencies.

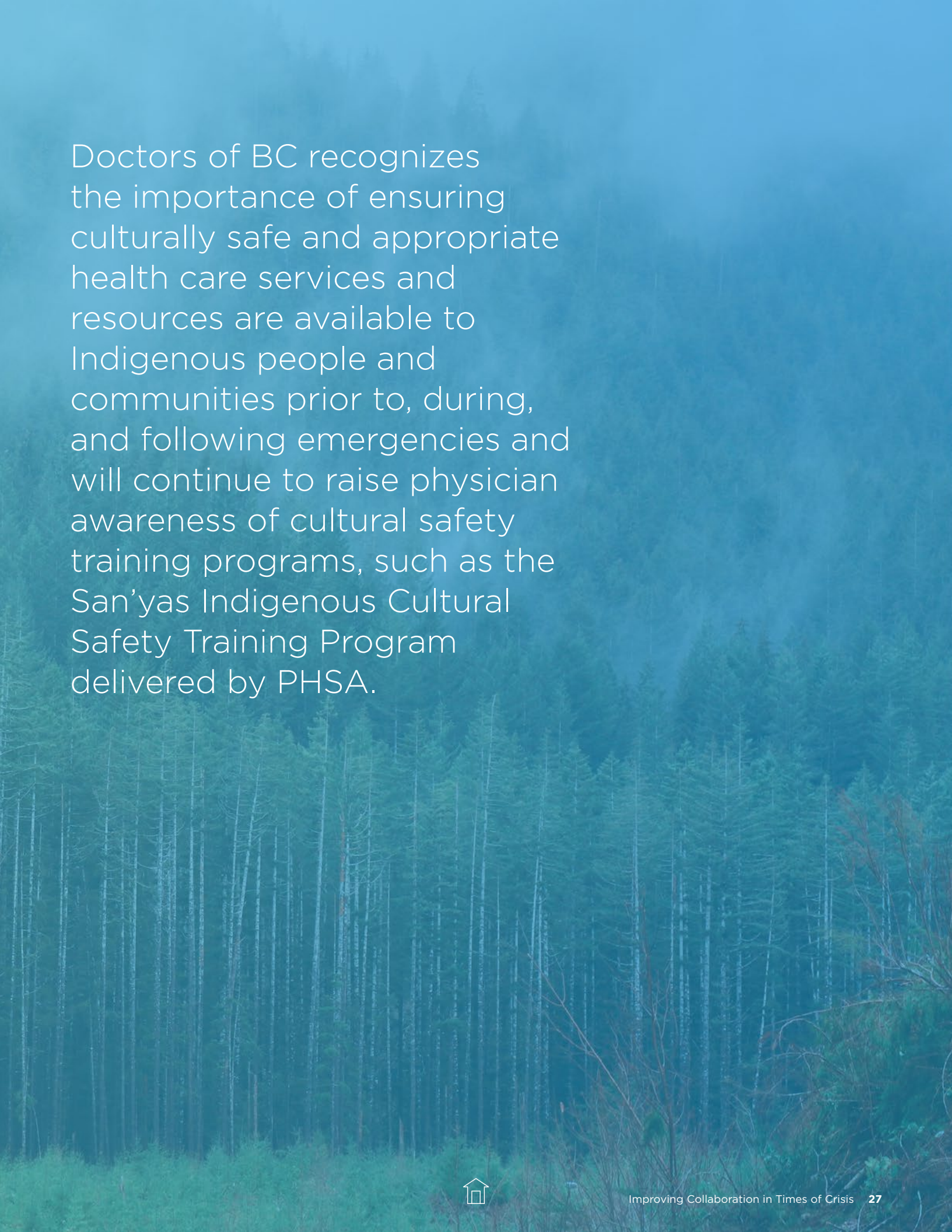
Social determinants of health, including socioeconomic status, living in rural and remote locations, and lack of culturally safe supports, also play a role in the health outcomes and experiences of those prior to, during, and following emergencies. There is an opportunity for physicians to identify and focus on their own vulnerable patient populations when developing their clinic emergency plans.

Research reveals that there are clear inequities among individuals and social groups in accessing and using information related to emergencies, contributing to the vulnerability of particular populations and subgroups.[28] For instance, data from many natural disasters occurring in the United States, including Hurricane Katrina, Hurricane Harvey, and the wildfires in California, show that while the human impacts of these disasters are widespread, older adults suffer disproportionately during and following emergencies.[28]

In the development and implementation of emergency response plans, it is important to ensure that the unique needs of particular populations and the needs of people and communities experiencing health inequities are specifically addressed so that emergencies do not exacerbate existing inequalities or create new ones. As such, health care providers, community leaders, including Indigenous leaders and health directors, and patient advocacy groups, should be provided with meaningful opportunities to participate in developing and reviewing these plans.

DOCTORS OF BC RECOMMENDS:

- ***The BC Government, working with stakeholders and ensuring meaningful input from physicians and other health care providers, develop a provincial health emergency framework that ensures the unique needs of vulnerable populations and those experiencing health inequities are specifically addressed in local, regional, and provincial health emergency response plans.***



Doctors of BC recognizes the importance of ensuring culturally safe and appropriate health care services and resources are available to Indigenous people and communities prior to, during, and following emergencies and will continue to raise physician awareness of cultural safety training programs, such as the San'yas Indigenous Cultural Safety Training Program delivered by PHSA.

CONCLUSION

Physicians and other health care providers play a key role in ensuring an effective medical response during and following an emergency, and as such, need to be engaged early in the health emergency planning process.

To equip physicians to continue to care for patients during emergencies, Doctors of BC commits to promoting practical resources and tools to help physicians in business continuity management, and raising physician awareness of community, provincial, and national training and leadership opportunities in health emergency management. Building physician capacity will not only help physicians to participate in health emergency management activities, but will also enable them to provide better care to patients during emergencies.

By working collaboratively with governments and community partners in health emergency management, physicians and other health care providers can make a meaningful difference to ensure the delivery of safe and appropriate care to all individuals and communities during and following an emergency.

APPENDIX: STAKEHOLDER FEEDBACK PARTICIPANTS

Doctors of BC thanks the following organizations for their participation and feedback in the development of this policy paper:

BC Emergency Health Services

BC Infectious Diseases Society

BC Ministry of Health

BC Mobile Medical Unit

BC Nurse Practitioners Association

BC Pediatric Society

Canadian Medical Association

Canadian Red Cross, BC and Yukon

Central Interior Rural Division of Family Practice

College of Pharmacists of BC

College of Physicians and Surgeons BC

Division of Plastic Surgery

Emergency Management BC

First Nations Health Authority

Interior Health Authority

Health Emergency Management BC

Patient Voices Network

Public Health Ontario

Resident Doctors of BC

Vancouver Police Department

Victoria Division of Family Practice

World Association for Disaster and Emergency Medicine

REFERENCES

1. Emergency Management BC. Emergency Management in BC: Reference Manual [August 16, 2017]. Available from: www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/emergency-preparedness-response-recovery/embc/training/reference_manual.pdf

2. Public Safety Canada. An Emergency Management Framework for Canada Second Edition [August 16, 2017]. Available from: www.publicsafety.gc.ca/cnt/rsrcs/pblctns/mrgnc-mngmnt-frmwrk/index-en.aspx

3. Insurance Bureau of Canada. Study of Impact and the Insurance and Economic Cost of a Major Earthquake in British Columbia and Ontario/ Quebec. October 2013.

4. Emergency Management BC. Public Health and Medical Services Annex [August 16, 2017]. Available from: www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/emergency-preparedness-response-recovery/provincial-emergency-planning/public-health-and-medical-services-annex.pdf

5. New Zealand Ministry of Health. National Health Emergency Plan: A Framework for the Health and Disability Sector [August 21, 2017]. Available from: www.health.govt.nz/system/files/documents/publications/national-health-emergency-plan-oct15-v2.pdf

6. American Medical Association. Code of Medical Ethics Opinion 8.3: Physicians' Responsibilities in Disaster Response and Preparedness. [March 15, 2018]. Available from: www.ama-assn.org/delivering-care/physicians-responsibilities-disaster-response-preparedness

7. BC Ministry of Health. Evidence Review: Public Health Emergency Management [August 30, 2017]. Available from: www2.gov.bc.ca/assets/gov/health/about-bc-s-health-care-system/public-health/public-health-emergency-management/public-health-management-evidence-review.pdf

8. Government of British Columbia. PreparedBC. [March 15, 2018]. Available from: www2.gov.bc.ca/gov/content/safety/emergency-preparedness-response-recovery/preparedbc

9. Comox Valley Emergency Program. Comox Valley Emergency Program [August 21, 2017]. Available from: www.comoxvalleyemergencyprogram.com/index.html

10. Victoria Divisions of Family Practice and the BC Ministry of Health Emergency Management Unit. Practice Continuity Workbook for Family Physicians. Available from: www.divisionsbc.ca/sites/default/files/Divisions/Victoria/2016-07-VDFP-Practice-Continuity-Workbook.pdf

11. Victoria Divisions of Family Practice and the BC Ministry of Health Emergency Management Unit. Practice Continuity Guide for Family Physicians. Available from: www.divisionsbc.ca/sites/default/files/CMSMedia/Divisions/DivisionCatalog-victoria/Emergency%20Response/2016%2007-VDFP-Practice-Continuity-Guide.pdf

12. Provincial Health Services Authority. Mobile Medical Unit. Available from: www.phsa.ca/our-services/programs-services/mobile-medical-unit

13. Vu M et al. The Mobile Medical Unit: A Unique Program in British Columbia. British Columbia Medical Journal. 2015;57(9):382-386.

14. ShakeOutBC. The Great British Columbia ShakeOut. [March 18, 2018]. Available from: www.shakeoutbc.ca

15. Office of the Assistant Secretary for Preparedness and Response. 2017-2022 Health Care Preparedness and Response Capabilities. November 2016.

16. The College of Family Physicians of Canada. The Role of the Family Doctor in Public Health and Emergency Preparedness [August 25, 2017]. Available from: file:///C:/Users/kbowers/Desktop/Emergency%20Literature/Role_Fam_Doc_Dec05.pdf

17. Cummings GE, Della Corte F, Cummings GG. Disaster Medicine Education in Canadian Medical Schools Before and After September 11, 2001. Canadian Journal of Emergency Medicine. 2005;7:399-405.

18. Dodd G, Murti M. What Community Physicians Could Offer During a Disaster. British Columbia Medical Journal. 2016;58(3).

19. Gomez D et al. Disaster Preparedness of Canadian Trauma Centres: The Perspectives of Medical Directors of Trauma. Canadian Journal of Surgery. 2011;54(1):9-16.

20. Khan Y et al. Effective Communication of Public Health Guidance to Emergency Department Clinicians in the Setting of Emerging Incidents: A Qualitative Study and Framework. BMC Health Services Research. 2017;17:312.

21. Bonanno Ga et al. What Predicts Psychological Resilience After Disaster? The Role of Demographics, Resources, and Life Stress. Journal of Consulting and Clinical Psychology. 2007;75(5):671-682.

22. Cherry N and Haynes W. Effects of the Fort McMurray Wildfires on the Health of Evacuated Workers: Follow-up of Two Cohorts. Canadian Medical Association Journal. 2017;5(3):e638-645.

23. Provincial Health Services Authority. Disaster Psychosocial (DSP) Program Concept of Operations.

24. BC Coroners Service. Illicit Drug Overdose Deaths in BC: January 1, 2008 – September 30, 2018: Available from: www2.gov.bc.ca/assets/gov/birth-adoption-death-marriage-and-divorce/deaths/coroners-service/statistical/illicit-drug.pdf

25. BC Ministry of Mental Health and Addictions. Responding to BC's Opioid Overdose Epidemic: Progress Update. September 2017. Available from: www2.gov.bc.ca/assets/gov/health/about-bc-s-health-care-system/office-of-the-provincial-health-officer/reports-publications/responding_to_bcs_overdose_opioid_epidemic_progress_update_october_2017.pdf

26. Johal S et al. Coping with Disaster: General Practitioners' Perspectives on the Impact of the Canterbury Earthquakes. PLOS Currents Disasters. 2014;1.

27. World Health Organization. Environmental health in emergencies. Available from: www.who.int/environmental_health_emergencies/vulnerable_groups/en

28. DeSalvo K and Petrin C. From Katrina to Wildfires: Leveraging Technology in Disaster Response. Health Affairs Blog. November 27, 2017. Available from: www.healthaffairs.org/do/10.1377/hblog20171113.545312/full

115 - 1665 West Broadway
Vancouver BC V6J 5A4
doctorsof**bc**.ca

@doctorsofbc

facebook.com/bcsdoctors

doctors of bc
Better. Together.