



Emergency and Disaster Preparedness

*Just when you thought you heard
the last word*

Presented by:

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IPAC Canada National Conference

Vancouver BC | May 28-31, 2023





No Conflicts of Interest



Learning Objectives

Review the different types of disasters that may be encountered

Discuss the impact of emergencies and disasters on staff and patient outcomes

Identify tools and resources available for the Infection Control Professional

Identify IPAC considerations when using alternative sites for delivery of care

Describe strategies for keeping disaster plans “evergreen”

What is an Emergency?

An unforeseen combination of circumstances or the resulting state that calls for immediate action.

What is a “disaster” ?

“A serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses that exceed the ability of the affected community or society to cope using its own resources” WHO 1998

Hazards and Vulnerability

Hazards – a dangerous phenomenon, substance, human activity or condition

Vulnerability – the likelihood that humans or assets will be damaged/destroyed or affected when exposed to a hazard

Hazards + Vulnerability = **Disasters**



Find what you're looking for... Search

- National Security
- Border Strategies
- Countering Crime
- Emergency Management
- Resources

Home > Canadian Disaster Database > Search > Results

Canadian Disaster Database

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- Export Data

548 results returned

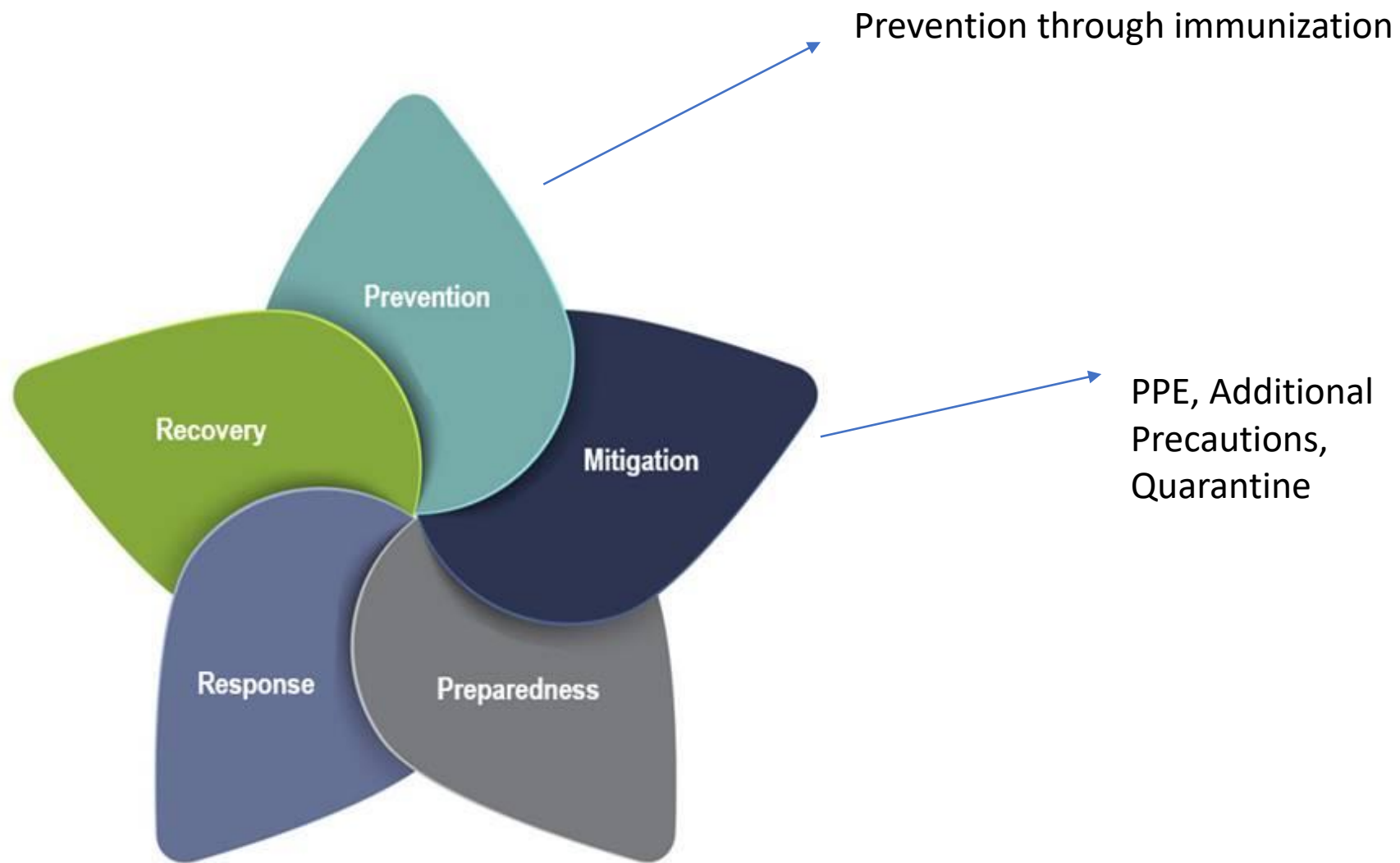
	Event Type	Place	Event Start Date	Fatalities	Injured / Infected	Evacuated	Estimated Total Cost
	Hazardous Chemicals: Derailment Release	Mississauga ON	November 10, 1979	0	0	225000	Unknown
	Meteorological - Hydrological: Winter Storm	Ontario, Quebec and New Brunswick	January 4, 1998	35	945	17800	\$4,635,720,433
	Meteorological - Hydrological: Flood	Saguenay River Valley QC	July 19, 1996	10	0	15825	\$300,000,000



Pillars of Emergency Management

- “These five components may be implemented in sequence or at the same time, but they are not independent of each other. Under most circumstances the components overlap as emergency management activities frequently fall under more than one component, and the boundaries between components are rarely distinct”. Ontario.ca





Pillars of Emergency Management



- A responsibility for emergency management and public safety in Canada.
- The Framework aims to strengthen FPT collaboration and ensure more coherent, complementary actions among the FPT governmental initiatives.

Pillars of Emergency Management

Prevention, Mitigation, Preparation, Response and Recovery

A living document -

Testing and trialing plans

Testing implementation

Assessing the plans

Having “dry runs”, mock drills

“National Risk Profile”: assessing hazards from weather events

Predicting in order to Prepare...

Modelling may not be able to predict what will really happen next.

Ask yourself if this event might lead to another challenge such as an interruption in supplies or resources.

Does the event potentially introduce an infectious disease?

Rumors, misinformation, and lack of control of information may interfere with the intentions of infection prevention and control.

Predicting in order to Prepare

What have we learned from other disasters in terms of infection outcomes?

- Infectious Disease Outbreaks in shelters and in refugee camps
- Disruption of immunization schedules

Haiti - Cholera outbreak post 2010 Earthquake



Photo by Eduardo Munoz/Reuter

Herd Immunity — what happens when vaccination rates plunge?

Polio 'making a comeback,' experts say

Many fear crippling virus will hitch a ride with refugees fleeing war-torn Syria

SIMEON BENNETT
BLOOMBERG

GENEVA—Polio, the crippling virus driven to the brink of extinction, may return to Europe as regional conflicts undermine a \$10-billion eradication campaign.

Polio's reappearance in Syria last month after a 14-year absence raises the risk that the virus will hitch a ride on unsuspecting refugees fleeing the country and return to areas, including Europe, that have been polio-free for decades, according to a letter published in *The Lancet* medical journal Friday.

Syria vows to vaccinate all children against polio

"Polio is making a comeback," Martin Eichner, a professor at the University of Tuebingen who co-authored the letter to *The Lancet*, said by phone.

Eichner and a German colleague warned that the vaccine used in the United States and Europe offers only partial protection against infection and called for heightened screening of sewage systems near refugee settlements in Turkey and Jordan. Syrian war refugees, moreover, have begun arriving in Western Europe, including Sweden and Germany.

Syria isn't the only area where poliomyelitis, as the disease is formally known, is rearing its head.

It has resurfaced in the Horn of Africa as well as in sewage samples in Israel and Egypt.



MOHAMMAD ZAATARI/THE ASSOCIATED PRESS

Syrian children wait for vaccination against polio at one of the refugee camps in the port city of Sidon, Lebanon.

dropped 99 per cent since 1988, largely thanks to a global vaccination campaign backed by Bill and Melinda Gates.

More than \$10 billion has been invested to eradicate the disease, according to the Global Polio Eradication Initiative, a partnership between the WHO, Rotary International, the U.S. Centers for Disease Control and Prevention, and the

The polio virus attacks the nervous system and can cause paralysis within hours, and death in as many as 10 per cent of its victims. There is no cure

The proportion of children under age five in Syria who've received

radic outbreaks globally, said Hamid Jafari, director of the Global Polio Eradication Initiative.

"What conflict does is that it produces that environment, whereby when poliovirus lands it has plenty of opportunity to thrive, circulate and paralyze children," Jafari said Thursday in a telephone interview.

Twenty-two vaccinators have been



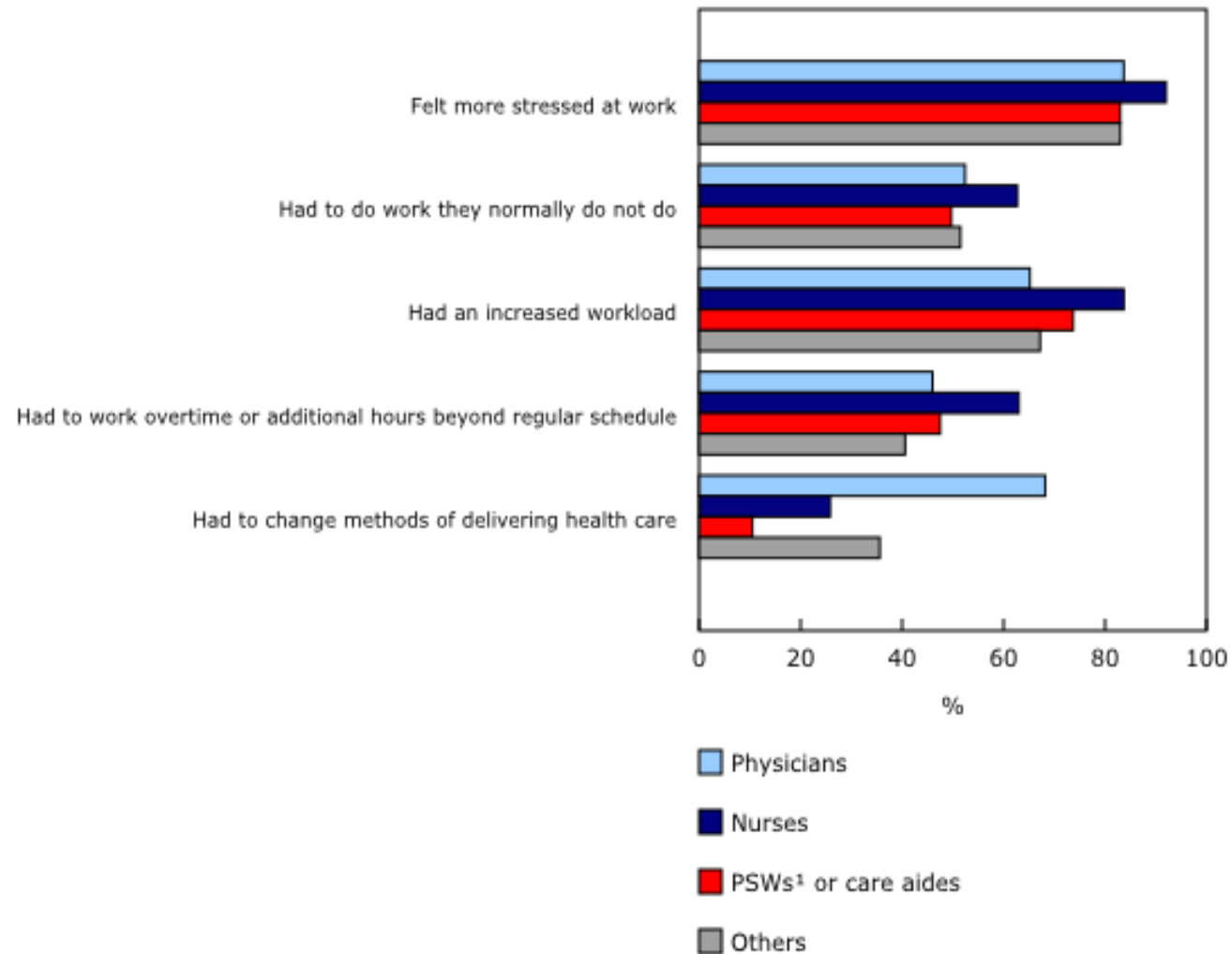
Statistics Canada

Health Care Worker (HCW) challenges included extended work hours, decreased vacation time, changes in the methods of delivering care and more.

The Survey on Health Care Workers' Experiences During the Pandemic (SHCWEP)¹ show that most health care workers (95.0%) reported that their job was impacted by the pandemic, and a large majority (86.5%) felt more stressed at work during the pandemic. (e.g. increase workload, additional practices/procedures)

¹ Survey conducted September – November 2021

Survey on Health Care Workers' Experience During the Pandemic



1. PSW stands for personal support worker.

Source(s):

Survey on Health Care Workers' Experiences During the Pandemic ([5362](#)).

<https://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=5362>

Impact of the pandemic on patients and patient outcomes:

Review Article

COVID-19 pandemic and mental health consequences: Systematic review of the current evidence

Nina Vindegaard, Michael Eriksen Benro

<https://doi.org/10.1016/j.bbi.2020.05.048>

Highlights

- COVID-19 patients displayed high levels of [PTSS](#) and increased levels of depression.
- Patients with preexisting psychiatric disorders reported worsening of psychiatric symptoms.
- Higher levels of psychiatric symptoms were found among health care workers.
- A decrease in psychological well-being was observed in the general public.
- Well conducted large-scale studies are highly needed.

Antimicrobial resistance and COVID-19: Intersections and implications

Gwenan M Knight, Rebecca E Glove, C Finn McQuaid, Ioana D Olaru, Karin Gallandat, Quentin J Leclerc, Naomi M Fuller, Sam J Willcocks, Rumina Hasan, Esther van Kleef, and Clare IR Chandler

Published online 2021 Feb 16. doi: 10.7554/eLife.64139. PMCID: PMC7886324; PMID: 33588991

- How changes due to COVID-19 in terms of antimicrobial usage, infection prevention, and health systems affect the emergence, transmission, and burden of AMR.
- Increased hand hygiene, decreased international travel, and decreased elective hospital procedures may reduce AMR pathogen selection and spread in the short term.
- However, the opposite effects may be seen if antibiotics are more widely used as standard healthcare pathways break down.



Preparing and Response

Adapting resources to different situations/scenarios:

- Create a cycle of testing and evaluation of disaster plan.
- Add things such as testing, implementation, assessing plans/evaluate and dry runs and mock drills, table top exercises
- Communication!
- Accessible resources

Recovery

Implement recovery plans for short-term and long-term priorities for restoration of functions, services, resources, facilities, programs and infrastructure.

Implement psycho-social recovery plans.

Implement procedures to restore and return operations from the temporary measures adopted during an incident to support normal operations after an incident.

Ensure a proactive communication strategy is in place to keep the community aware of actions being taken.

Recognize the importance of a systematic approach to incorporating prevention and mitigation strategies into recovery programs.

Re-evaluate the recovery plans and strategies to ensure that risk reduction priorities of prevention and mitigation strategies remain relevant and effective.



Global Strategy on Human Resources for Health

Adopted 2016

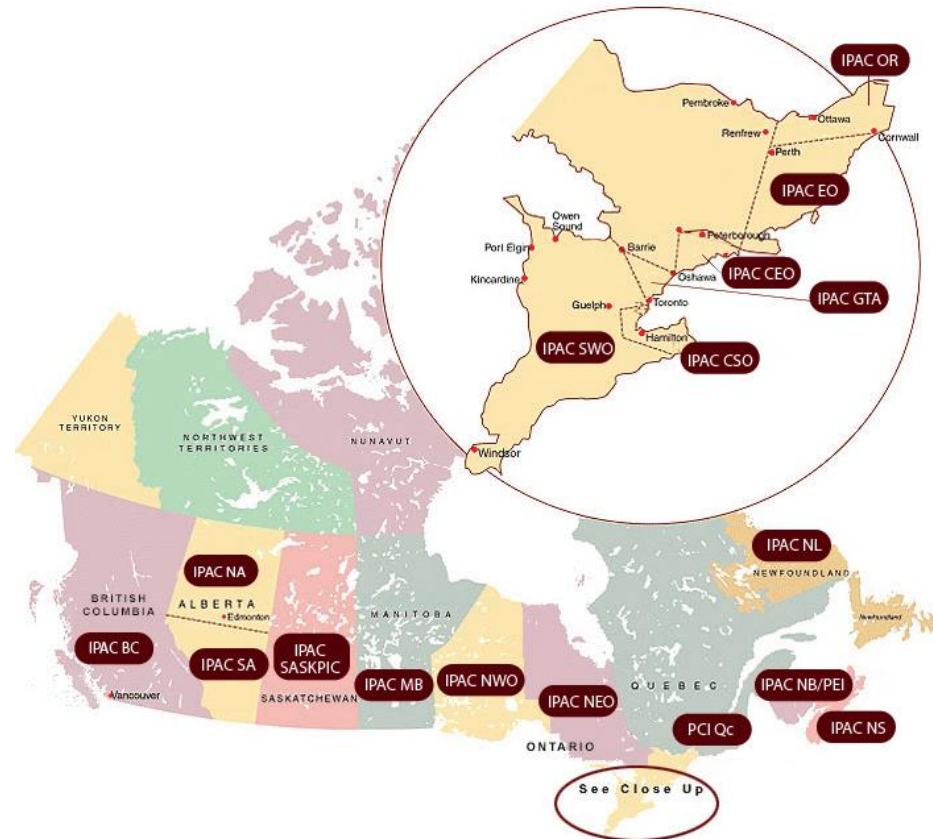
“The health workforce has a vital role in building the resilience of communities and health systems to respond to disasters caused by natural or artificial hazards, as well as related environmental, technological and biological hazards and risks”.

June 2022...”The impact of the pandemic on our health and care workforce is grave and substantive”.

Human healthcare resources

- Building resilience and hardiness
- Self Care

- IPAC Canada
 - IPAC Canada Chapters



Debrief after an emergency (recovery)

- The after-action review (AAR) process is part of the emergency management cycle where agencies involved in the emergency attend a debrief.
- Debriefs capture:
 - Operational opportunities for future events
 - Improve coordination and communication with stakeholders
 - Contribute to more effective operations and activities

<https://www2.gov.bc.ca/gov/content/safety/emergency-management>



Educational, Online Resources



An Emergency Management Framework for Canada 3rd Edition

<https://www.publicsafety.gc.ca/cnt/rsrcs/pblctns/2017-mrgnc-mngmnt-frmwrk/2017-mrgnc-mngmnt-frmwrk-en.pdf>





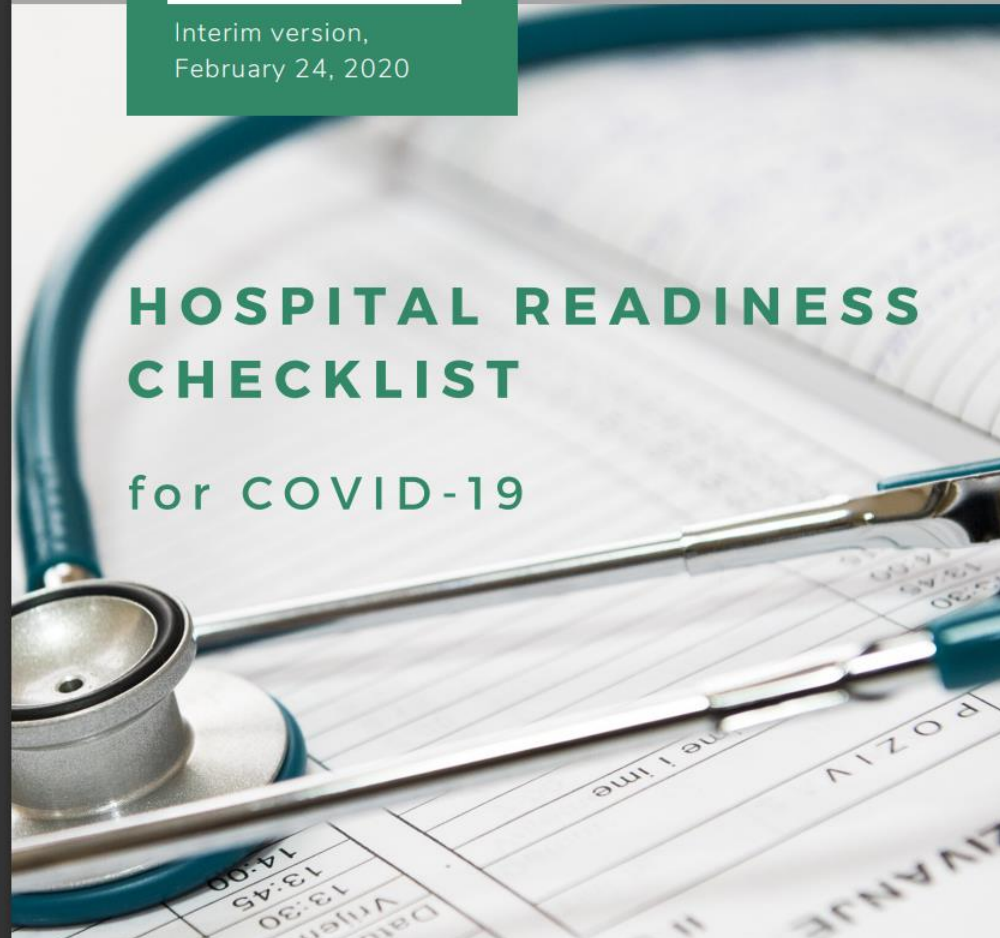
World Health
Organization

REGIONAL OFFICE FOR Europe

Interim version,
February 24, 2020

HOSPITAL READINESS CHECKLIST

for COVID-19





MEMBER LOGIN

Search our site... SEARCH

Emergencies and Disasters Toolkit (4th Edition, Revised 2022)

This toolkit contains material to assist an infection prevention and control professional (ICP) when planning for and responding to a disaster utilizing an all-hazards type approach. The toolkit provides useful items such as checklists and templates that can be adapted to specific types of health care settings. Several of the resources have been used in the field and found to be useful by their creators.

Additional resources, key websites and references have been provided.

The toolkit contains procedures and information that may not be the sole responsibility of the ICP but are important to incorporate into the organization's overall strategy and plan of action. Any emergency or disaster requires a coordinated response with several key players and aligned with local/regional and

- National Infection Control Week
- Guidelines & Standards
- Position Statements and Practice Recommendations
- Canadian Journal of Infection Control
- Industry Innovations
- Infectious Disease Resources



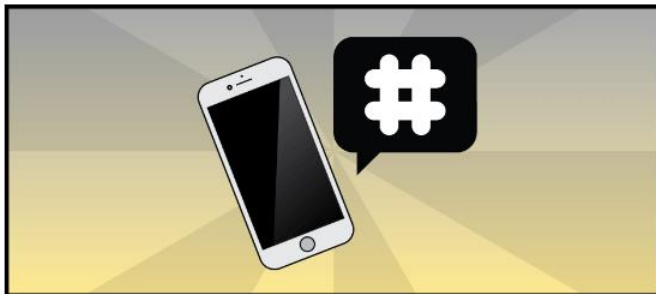
Menu

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Emergency education programs and toolkits

Education and awareness materials for hazards and preventable emergencies:

- General public education programs
- Resources for teachers
- Community events
- Social media kits



[Social media toolkits](#)

Create awareness about preparing for



[Emergency Preparedness Week](#)

Get pre

[Check out our new site](#)



[High Ground Hike](#)

This is a community-led tsunami evacuation

The National Institute for Occupational Safety and Health (NIOSH)

Emergency Preparedness and Response Program



Directory of NIOSH Emergency Response Resources

[Print](#)



Emergency Planning Checklist

https://www.ccohs.ca/oshanswers/hsprograms/emergency_management.html

emergency_management.pdf | 2 / 7 | 100%

Emergency Management Checklist					
Element	Documented		Functional Ability Proven		Comments
	Yes	No	Yes	No	
Statement of policy on emergency response					
Plan given appropriate authority by highest management level					
Plan is distributed to all that need to know					
Plan establishes the emergency response team					
The authority to declare a full evacuation is designated					
The authority to declare the emergency is "over" is designated					
All response personnel are medically fit to perform their duties					
The following functions have been clearly defined and assigned to individuals:					
Plan administration					

Communication

Timeliness of Communication

- Deliver messages in a format that is familiar to the audience



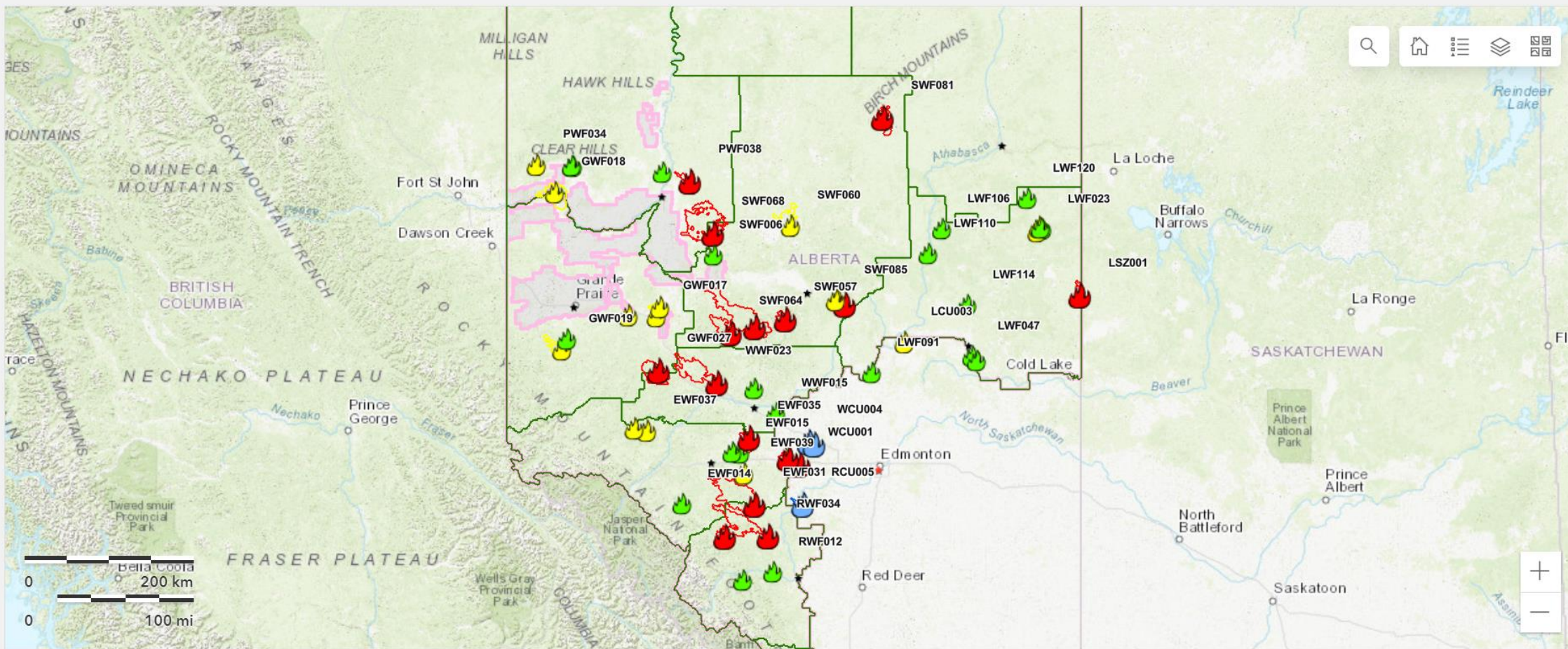
COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU)

Total Cases 481,442,100	Total Deaths 6,124,580	Total Vaccine Doses Administered 10,894,602,496	Weekly Cases
28-Day Cases 45,169,179	28-Day Deaths 178,916	28-Day Vaccine Doses Administered 366,101,901	
Cases Deaths by Country/Region/Sovereignty			Weekly Doses Adminis
Korea, South 28-Day: 8,868,598 7,128 Totals: 12,003,054 15,186	Esri, FAO, NOAA Powered by Esri		
Vietnam 28-Day: 5,690,468 2,162 Totals: 9,011,473 42,306	Admin0 28-Day Weekly 28-Day		
Germany 28-Day: 4,712,847 4,886			



Alberta Wildfire Status Dashboard

January 1 - December 31



Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, NPS, AAFC, NRCAN | Government of Alberta | Alberta Agriculture and Forestry, Government of Alberta | Copyright Government of Alberta

Powered by Esri

Map

Disclaimer

Wildfires of note

Means of Communication

Association of Public-Safety Communications Officials

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APCO
International
Leaders in Public Safety Communications®

Best Practices for the Use of Social Media in Public Safety Communications

APCO ANS 1.112.2-2020

11°C Cloudy

Search

ENG US

5:19 PM
2023-04-22

Social Media

IPAC dept. should consider small sound bites and “tweets” that they can use.

Most beneficial when organizations cannot keep up with phone calls and are unable to monitor social media due to a significant increase in call volume.

Agencies should consider pre-planning with their surrounding agencies regarding social media policy, practices, and any impact on the operational response during an emergency incident.

Social Media

Agencies should develop policies for monitoring and responding to social media posts from citizens during an emergency.

Agencies must recognize citizens expect immediate information. If agencies do not provide the needed information, the public will seek it from other sources.

Any release of information or public communications regarding the incident should follow the agency's designated decision making policies.

How will Communication be delivered?

- Proactive vs Reactive Media relations
- Press Release vs Press Conference
- Clarity
 - Think of the effect that your news will have on the public
 - Predict what public reaction might be
 - Guide it appropriately
 - Consult with media experts before taking irrevocable steps
 - Remember that the public good is the highest priority
- IPAC Canada- Infection Prevention and Control in Emergencies and Disasters Toolkit

Resilience

- Resilience is the capacity of a system, community or society to adapt to disturbances resulting from hazards by persevering, recuperating or changing to reach and maintain an acceptable level of functioning.



Mitigating the impact of infection control practices

Ethical decision making:

Distinguish between loneliness *versus* social isolation

Laura L. Ooi, Li Liu, et al; Social isolation, loneliness and positive mental health (PMH) among older adults in Canada during the COVID-19 pandemic. HPCDP April 2023

- Pooled results from PHAC's 2 surveys *Survey on COVID-19 and Mental Health* (collected by stats Canada in 2020 and 2021). 5332 respondents >65 yrs.

“Social isolation (associated with physical health problems and mortality) and loneliness (more associated with mental health problems e.g. depression) were associated with poorer well-being among older adults in Canada during the pandemic. **Loneliness** remained a significant factor related to all PMH outcomes after adjusting for social isolation but not vice versa. Highlights the need to support lonely older adults during and beyond the pandemic”.

This study can inform public health policy and funding considerations for programs and services that specifically target loneliness among older adults.

My Anecdote...

- Dialogue with patients during a VRE outbreak 1999
 - Outbreak on a general medical unit
 - Interviews of patients placed in Contact Precautions
 - Older adults expressed feeling felt less control over their circumstance
 - “Quarantine” – stigma
 - Policies and training of staff and volunteers to visit those isolated from other patients/residents

Non-Traditional Sites

Alternative Sites

Alternative Sites

- What to consider an alternative site? When to activate the site?
- IT Disaster Recovery sites for data management : cold site, warm site and hot site
- Staffing issues (who orientates them to the setting?)
- What types of human resources? RN? PSW? Environmental? Physician?
- Does it function with an organization



COVID-19
Immunization Clinic

**VACCINATION
AREA**





Sunnybrook Mobile Health Unit

Pearls of Wisdom



Gloria



- “With previous emergency evacuations, some LTC homes were not aware of their receiving care facility. Evacuation plans were not updated and some were misplaced and it was time consuming in the midst of the emergency to make sure patient/resident identification, along with their health records were ready to go”.
- “Make sure to include your partner organizations in your Emergency and Disaster Planning and table top exercises”. Collaborate and support.

Tim



- Context is important, but it's important to tie actions during emergency response to principles. There were lots of things done during COVID that were based on IPAC principles, but depending on other contexts may not be the right things to do.
- New ICPs may benefit from thinking about the general IPAC principles when planning for the next event, rather than just applying a list of things that they used in a previous event, that may not apply in a different context.
- A support system is needed. I know that sounds obvious, but I think too often we expect that each facility has worked things out during planning, or that we can refer them to a few documents/guidance/resources and they should be able to apply what is written. But experience has shown this isn't always the case. Having a "buddy system" of sorts helps to ensure there is broader support – a safety net.

Suzanne



- I have observed people feeling scared – and ***reacting*** rather than taking a pause, to think about the measures to be implemented. They quickly debrief, think about it after and then move on to the next activity..
- We are good at documenting “lessons learned” but do we *implement* those lessons learned?
- Put in measures /strategies/resources that can be sustained over time

Anne and Laura



- Test your E&D plan! Review the plan annually. (Update with new scenarios, verify the alternate sites for surge capacity still exist!)
- Decide to review a *section* of the plan in more detail each year (e.g. a table top exercise). Invite your internal and external partners to the table. Collaborate and support.
- Can our tools and resources be easily adapted to the current event?

Diane and Gayle



- The importance to debrief and the power of debriefing for the health care team (resilience)
- Decision making “in the moment” especially with surge capacity. Have your skilled/experienced HCW involved with this decision making.
- Emergency Department screening and triage has become so much better! We picked up a significant reportable disease with the travel history.
- We now have some good habits since the pandemic. Teams are automatically donning the appropriate PPE for Code Blue!

Sandra



- Communicate!
- Ongoing communication internally and with partner organizations.
We are dependent on each other in a disaster!
- For communication , be prepared for the unknown and course-correct if necessary – manage expectations and communications.
- How to reassure people with change occurring..

Audience :

How do we move the needle?

Scalability – going from local to F/P/T level to global – or – in the opposite direction. How do we take global initiatives to the local level?

Resilience – stress/ burnout and long term effects. How do we work with our Occupational Health programs and Employee Assistance programs?

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- Laura Farrell – former Infection Control Specialist Public Health Ontario
- Gayle Gillies – former Halton Health Care Emergency Department RN
- Diane Smith – former Quinte Health Care Emergency Department RN



Thank you !

