Preparing Health Care Facilities in Canada for Climate Change

WEBINAR
2:00 PM to 3:00 PM (EDT) May 8, 2013
Funding for this project was provided by:
The Nova Scotia Climate Change Adaptation Fund

http://climatechange.gov.ns.ca/content/adaptation Fund
Presenters

• Linda Varangu,
  • Executive Director, Canadian Coalition for Green Health Care

• Dr. Peter Berry,
  • Senior Policy Analyst, Climate Change and Health Office, Health Canada
Agenda

1. Project Overview
   - Linda Varangu

2. Climate Change Impacts on the Health of Canadians - Implications for the Health Sector
   - Dr. Peter Berry

3. Presentation of the Toolkit – Linda Varangu
   - Part 1: Facilitators Guide
   - Part 2: Completing the Checklist
   - Part 3: Best Practices and Resources

4. Questions and Discussion

5. Close
1. Project Overview

Linda Varangu,
Canadian Coalition for Green Health Care
Health Care Facility Climate Change Resiliency Toolkit

Purpose:
- Increase awareness of the impacts of climate change on health care facilities in Canada
- Enable health care facility officials to assess resiliency to climate change
- Provide references and best practices to help health care facilities become more resilient to climate change
Methodology

- Advisory Committee
- Literature Review
- Developed a draft resiliency toolkit
- Expert Reviewers
- Tested the toolkit with 6 pilot health care facilities
- Ground-truthing workshop
- Webinar and promotion of toolkit
Partners and Advisors

RESEARCH PARTNERS
- Canadian Coalition for Green Health Care
- Health Canada, Climate Change and Health Office
- Canadian Healthcare Engineering Society – Maritime Chapter
- Guysborough Antigonish Strait Health Authority (GASHA), NS

ADVISORS
- Capital Health District Health Authority, NS
- Nova Scotia Climate Change Directorate
- Department of Health and Wellness, NS

REVIEWERS
- Sustainable Development Unit, National Health Service, United Kingdom
- World Health Organization, WHO-PAHO
Pilot Health Care Facilities

**Nova Scotia**
- St. Martha’s Hospital, Guysborough Antigonish Strait Health Authority (GASHA)
- Soldiers Memorial (Annapolis Valley District)
- QE II (Capital Health District)
- Aberdeen Hospital (Pictou County District)

**Ontario**
- The Ottawa Hospital (Ottawa, Ontario)

**Manitoba**
- Stonewall Hospital (Stonewall, Manitoba)
Health Care Facility Climate Change Resiliency Toolkit

Considerations

- Many tools exist to inform risk management / adaptation
- The resiliency toolkit can compliment existing tools
- Potential uses of the resiliency toolkit include:
  - Adapt toolkit to suite the needs of your health region
  - Incorporate relevant components of toolkit to existing tools
  - Adopt the toolkit as is to inform potential current and future adaptive strategies
  - Provide references and best practices to help health care facilities become more resilient to climate change
The Province of Manitoba has developed an online Hazard, Risk and Vulnerability Assessment (HRVA) tool that addresses risks from current climate variability and future climate change.

Information from the health care facility resiliency toolkit is being integrated into the new HRVA Tool to provide a broader range of questions that are relevant to communities and health care facilities in that province.
2. Climate Change Impacts on the Health of Canadians – Implications for the Health Sector

Dr. Peter Berry, Health Canada
Climate Change Impacts on the Health of Canadians - Implications for the Health Sector

Canadian Coalition for Green Health Care
Webinar
May 8, 2013

Peter Berry Ph.D.
Climate Change and Health Office
Safe Environments Directorate
Health Canada
Overview

• Climate change impacts on health
• Climate change impacts on health care facilities
• Managing increased risks to improve patient, staff and public safety
Climate change impacts on health
Health Risks in Canada from Climate Change

- Psychosocial impacts from droughts
- Permafrost melt damaging infrastructures
- Heat-related illnesses and deaths
- Water-borne diseases from floods
- Respiratory illnesses from forest fires
- Expansion of Lyme Disease vector
- Dangerous travelling conditions
- Changes in drinking water quality and quantity
- Food security - changing animal distributions
- Health impacts from more severe storms

Source: Health Canada, 2008

Weather-related disasters in Canada – 1900-2011

Canadian Disaster Database, 2012
Evidence of health impacts from heat

Figure 2: Relationship between daily maximum temperatures in June, July and August, and all non-traumatic deaths for selected Canadian cities, 1986–2005

Daily maximum temperatures during June, July and August from 1986 to 2005 were correlated with all non-traumatic deaths using the Generalized Additive Statistical Model.48,49,c,d

Source: Adapted from B. Casati and A. Yagouti, in press.50
Temperature projections – Select Canadian cities

Figure 1: Current and projected number of days exceeding 30°C/86°F for Canadian cities

The number of hot days for each city is based on the observed temperature data between 1961 and 1990, and projected for 2021–2040, 2041–2060 and 2081–2100.
Climate change impacts on health care facilities
Climate change and extremes

“A changing climate leads to changes in the **frequency, intensity, spatial extent, duration, and timing** of extreme weather and climate events, and can result in unprecedented extreme weather and climate events.”
Climate change and health risk factors
  • Extreme weather events
  • Food-and water-borne contamination
    • Air quality
    • Vector-borne diseases

Healthcare Facility Impacts
  • Structure and function
  • Health, safety and security
    [staff, patients, visitors]
    [community]

Healthcare sustainability risk factors
  • Energy & operating costs
  • Socio-econo-enviro-health
  • Natural resource quality
Pressures on health and social services

Key Findings from the Assessment

- Extreme heat events / heat waves – (Vida et al., 2012; Anderson et al., 2013; Bassil, 2012)

- Floods – (Haines et al., 2006; Jonkman et al., 2011; Du et al., 2010; Ebi and Paulson, 2010)

- Wildfires (Henderson et al., 2011),

- Air pollution (Government of Canada, 2012)
Vulnerability of health and social services

Key Findings from the Assessment

- **Damage to health infrastructures** such as hospitals, clinics and nursing homes
- **Inadequately trained personnel** or lack of an emergency plan
- **Hospitals that contract out** certain essential services (e.g. laundry and food) may have them interrupted during an emergency
- **Overcrowding in emergency shelters** during a disaster may increase exposure to infectious diseases (e.g. influenza) of health care workers
- **Electronic medical records** could face access delays of up to days or weeks in the event of a power outage during a disaster

With permission of Brian McMally
Recent experience in Nova Scotia

Hurricane Juan (category 2) passed through Nova Scotia in late September 2003

Deadliest aspects of hurricanes:

- preceding storm surge (9 out of 10 deaths)
- winds
- psychosocial impacts

Major hospitals affected
- Victoria General in Halifax – part of roof ripped off
- Flooding and water damage to 8 floors
- 200 patients relocated
- Operating theatres closed for 4 weeks
- 78% scheduled surgeries cancelled
Managing increased risks to improve patient safety
Health benefits of preparing now

- **Reduced respiratory diseases**
  - Change building design to reduce energy use, for heating and cooling

- **Reduced heat and cold stress**
  - Increase urban tree coverage and vegetation to reduce the urban heat island effect

- **Reduced heat illnesses and deaths**
  - Change building codes and land regulations to reduce damage from climate change hazards

- **Reduced impacts from extreme weather**
Climate change resiliency indicators for healthcare facilities

WHO 2009: Make hospitals safe in emergencies

- Develop and implement plans, policies, programs
- Select a safe site for healthcare facilities
- Design and construct safe hospital facilities
- Assess the safety of existing health facilities
- Protect health workers, equipment and supplies
- Ensure that health facilities receive essential services
- Develop partnerships between health facilities and the community
- Develop an emergency risk management programme for each facility
- Test and update response plans with drills and exercises
- Train the health workers to respond to emergencies
- Evaluate and learn lessons from past emergencies and disasters
Climate change resiliency indicators for healthcare facilities

WHO 2009: Addressing climate change in healthcare settings

- Energy efficiency
- Green building design
- Alternative energy generation
- Transportation
- Food
- Waste
- Water
3. Presentation of the Toolkit

Linda Varangu,
Canadian Coalition for Green Health Care
Health Care Facility Climate Change Resiliency Toolkit

Available at:
Canadian Coalition for Green Health Care
http://www.greenhealthcare.ca/climateresilienthealthcare
Download materials from website:
http://www.greenhealthcare.ca/climateresilienthealthcare/toolkit/
Health Care Facility Climate Change Resiliency Toolkit

- Part 1: Facilitator Presentation
- Part 2: The Resiliency Checklist
- Part 3: Best Practices and Resources
Contents

- How facilitators can use this presentation
- Benefits of assessing health care facility resiliency to climate change
- Introduction to climate change impacts on health care facilities (in Nova Scotia)
- Completing the health care facility resiliency assessment checklist
How facilitators can use this presentation

- Conduct the assessment by following instructions outlined in this presentation.
- Use this presentation to facilitate the assessment discussion.
- Engage health care facility officials by tailoring this presentation to your needs.
- Administer the assessment checklist at a meeting, workshop, or through direct mail-out.
- Use the notes pages and comments sections in the tool to capture information and data.
Benefits of assessing climate resiliency

- Health care facilities are vital assets to communities on a day-to-day basis and when disaster strikes.
- Safe hospitals protect patients, visitors staff and the investment in health infrastructure from hazards.
- Safe hospitals continue to function and provide life-saving medical care in disasters.
- Assessment of the safety and preparedness of hospitals identifies priorities for remedial action, including cost-effective retrofitting.
- New hospitals are safeguarded by risk-sensitive siting, design and building in compliance with building codes.
- Emergency planning, staff training and exercises build hospital capacity to manage risks and respond effectively.

WHO, 2011
Benefits of assessing climate resiliency

- Helps identify and better characterize vulnerabilities and risk levels at your health care facility and provides a data baseline.
- Helps stimulate actions to increase the capacity of health care facility staff for climate change impacts, many of which are occurring now.
- Identifies key officials and institutional linkages - mobilizes health care facility staff and community partners to work on shared goals.
- Improves health care facility climate awareness and preparedness
- Supports evidence informed decision-making to reduce health risks from climate change.
Introduction to climate change impacts on health care facilities
Climate change impacts on health in Nova Scotia

- Climate change is a health issue in Nova Scotia.
- Risks to health from climate change are increasing because of increases in severity and frequency of extreme weather events, expansion of vector-borne diseases and increases in food and water borne contamination.
- Some impacts are already being observed - Since the first cases reported in 2002, the annual number of reported cases of Lyme disease in Nova Scotia has been increasing.
- Increased climate variability are expected to put more pressures on health care facilities and threaten patient, staff and visitor safety.
- Health care facility resiliency assessments can provide information to raise awareness of health risks and direct actions to help people at risk.
Climate change in Canada: Resources


- Update: From Impacts to Adaptation: Canada in a Changing Climate (Natural Resources Canada, available in 2013)
Climate-related impacts to health care facilities: examples

- Extreme storms
  - Ice-storms
  - Hurricanes
- Water-borne contamination
- Heat-waves
Hurricane Juan, 2003

- A category 2 hurricane made landfall in Nova Scotia as one of the most damaging hurricanes in Canada.
- It was responsible for eight deaths
- More than 300,000 people were without power for up to 10 days
- Telephone service was disrupted and the water infrastructure was compromised
- Hospital infrastructure was damaged (e.g. roof damage, flooding and water damage, patient evacuations, limited beds, compromised resources)

Adapted from Health Canada, 2009
Climate change sensitive health programs

- Food Safety
- Infectious Disease Management
- Mental Health
- Health of Northern Populations
- Travel Medicine
- Seniors’ Health
- Sustainable Development
- Adaptation
- Impacts
- Mitigation
- Health care system capacity
- Children’s Environmental Health
- Occupational Health
- Emergency Preparedness
- Air and Water Quality
Climate change risks to health care facilities

Climate Change Impacts on Health
- Extreme weather events
- Food-and water-borne diseases
- Air quality
- Vector-borne diseases

Health Care Facility Impact
- Physical structures
- Patient services
- Health, safety and security of patients, staff and visitors

Health Care Facility Adaptation Options
- Emergency management
- Facilities management
- Health services management

COMMUNITY IMPACTS

HEALTH CARE FACILITY VULNERABILITY
Background for the Resiliency Checklist

Resiliency - Definition

- The ability of a community to withstand a disaster and its consequences (resistance)
- The ability of a community to “bounce back” to its pre-disaster level of functioning (recovery)
- The extent to which a community learns from the disaster experience and transforms this knowledge into more advanced emergency management functioning (creativity)
### Background for the Resiliency Checklist

#### Resiliency - Indicators

<table>
<thead>
<tr>
<th>Climate Risk</th>
<th>Creativity</th>
<th>Resistance</th>
<th>Recovery</th>
</tr>
</thead>
</table>
| Extreme Weather (EW) Emergency| - Assess EW risks & response capacity*  
- Learn & increase EW awareness*  
- Budget for EW                  | - Install HVAC system  
- Build partnerships*  
- Climate proof buildings, protect critical assets  
- Diversify energy sources  
- Environmentally preferable purchasing | - Emergency management program with EW plans*  
- Secure back-up supplies for EW emergencies  
- EW emergency training  
- Receive or monitor EW warnings  
- Adopt ICS for EW emergencies and mainstream EW into color code responses*  
- Protect vulnerable*  
- Health surveillance*  
- Mutual aid/support* |
| Food-borne Contamination (FBC)| - Assess risks associated with FBC emergencies  
- Learn and raise awareness of sustainable food options | - Adopt sanitary food service practices (food handling, preparation and storage) and sustainable food waste practices  
- Procure local food and produce food on-site | - Develop FBC response plans and integrate into EM program  
- Diversify food suppliers  
- Receive or monitor FBC outbreaks, receive warnings of food recalls  
- Implement FBC plan  
- Diagnose, treat and report FBIs  
- Monitor food supply [in an emergency] |
Background for the Resiliency Checklist

Resiliency - Indicators

<table>
<thead>
<tr>
<th>Climate Risk</th>
<th>CREATIVITY</th>
<th>RESISTANCE</th>
<th>RECOVERY</th>
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</thead>
</table>
| Water-borne Contamination (WBC) | -Assess WBC risks and response capacity  
- Conduct a water-use audit  
- ID conservation measures | -Implement water conservation strategies  
- Establish sustainable waste management practices to protect water resources | -Develop an emergency water restriction plan and WBC response plan  
- ID water supply options  
- Receive or monitor WBC alerts and water-use restrictions | -Implement plans to de-contaminate water  
- Diagnose, treat and report WBI cases  
- Monitor water resources |
| Air Quality (AQ)           | -Assess AQ health risks  
- Learn strategies to improve AQ and health  
- Set targets | -Establish green-space  
- Support mass transit, car-pooling, telehealth, active transportation  
- Use clean energy | -Develop a smog plan  
- Receive smog advisories  
- Monitor indoor air quality and ensure proper maintenance of HVAC system | -Minimize risks to vulnerable patients (reduce exposure)  
- Implement a smog strategy and notify staff/patients/visitors |
| Infectious Diseases (ID)   | -Assess ID risks and response capacity  
- Learn of new and emerging IDs  
- Evaluate plans | -Minimize ID infections via building design (e.g. sanitation, isolation)  
and control of vector breeding sites  
- Vaccinate staff/patients | -Develop an ID plan  
- Secure access to vaccines, medications and critical supplies  
- Train staff & practice routine infection control | - Implement infection control plan (e.g. isolation, staff PPE)  
- Diagnose, treat and report WBI cases |
Completing the Resiliency Checklist

- General (4 questions)
- Assessing Climate Related Risks (19 questions)
- Risk Management to Reduce Climate Related Risks (45 questions)
  - Procurement of health care resources and supplies
  - Notifications, monitoring and surveillance
  - Clinical risk management
  - Infrastructure and systems risk management
  - Energy supply and use
- Building Capacity to Adapt to Climate Change (14 questions)
  - Sustainable health care and climate change mitigation
Completing the Resiliency Checklist

Responding to Questions

- Refer to toolkit questions presentation and respond as a group
- Respond using the following legend:
  - Yes
  - Somewhat / Sometimes
  - No
  - I don’t know
- Use the comments fields to provide information on:
  - Information gaps
  - Status of activities
  - Other key stakeholders that may have primary responsibility
  - Other pertinent information you wish to record
Completing the Resiliency Checklist

Best Use of Results

- Use your resiliency score to inform gaps and needs
- For resiliency areas where you need more information:
  - Exchange information with other facilities
  - Seek information from experts
  - Refer to the Canadian Coalition for Green Health Care Best Practices Resource Guide
Useful Resources

Hospital Safety Index (WHO, 2009)
category&id=907&Itemid=884

Make Hospitals Safe in Emergencies (WHO, 2009)

http://www.who.int/hac/events/drm_fact_sheet_safe_hospitals.pdf

Addressing climate change in healthcare settings (WHO, 2009)

Safe Hospitals in Emergencies (ISDR, 2010)
http://www.wpro.who.int/emergencies_disasters/documents/SafeHospit
lsinEmergenciesandDisastersweboptimized.pdf
Health Care Facility Climate Change Resiliency Toolkit

Part 2: Completing the Checklist
The Assessment Checklist

Total 78 questions

- General (4 questions)
- Assessing Climate Related Risks (19 questions)
- Risk Management to Reduce Climate Related Risks (45 questions)
  - Procurement of health care resources and supplies
  - Notifications, monitoring and surveillance
  - Clinical risk management
  - Infrastructure and systems risk management
  - Energy supply and use
- Building Capacity to Adapt to Climate Change (14 questions)
  - Sustainable health care and climate change mitigation
1. Please record your name and role at your health care facility and the date you completed the checklist.

*Examples: emergency management, facilities management, health care services, supply chain management, food and nutritional services, waste management etc.*

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Area of Work*</th>
<th>Date</th>
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</table>
1. Current and future climate variability can pose a variety of risks to people and infrastructure that could affect continuity of care at your health care facility. Please indicate if your health care facility considers the following climate-related hazards when conducting risk assessments.

<table>
<thead>
<tr>
<th>Climate Risk</th>
<th>Yes</th>
<th>Somewhat</th>
<th>No</th>
<th>I don’t know</th>
<th>This is not a risk for my region</th>
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<tbody>
<tr>
<td>a. Extreme heat</td>
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<td>b. Extreme cold</td>
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<td>c. Extreme rain and snowfall</td>
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<td>d. Drought</td>
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<td>e. Wildfire</td>
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<td>f. Extreme weather – tornado</td>
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<td>g. Extreme weather – freezing rain, ice storm,</td>
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<td>hailstorm</td>
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<td>h. Extreme weather – thunderstorm, lightning</td>
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<td>i. Extreme weather – hurricane and related storms</td>
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<td>j. Extreme weather – avalanche, rock-, mud- and</td>
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<td>landslide, debris flow</td>
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<td>k. Poor air quality and smog</td>
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<td>l. Food-borne contamination and/or diseases</td>
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<td>m. Water-borne contamination and/or diseases</td>
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<td>n. Vector-and rodent-borne diseases</td>
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<td>o. New and emerging infectious diseases</td>
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</table>
15. Climate change is expected to increase the frequency and/or intensity of climate-related hazards in Canada. Currently is the infrastructure of your health care facility able to withstand climate-related emergencies and able to provide safety for patients, staff and visitors?

☐ Yes
☐ Somewhat
☐ No
☐ I don't know

COMMENTS: [blank]
18. Please indication if considerations of how climate variability and change may affect the following facility elements is regularly included.

<table>
<thead>
<tr>
<th>Vulnerability Area</th>
<th>Yes</th>
<th>Somewhat</th>
<th>No</th>
<th>I don't know</th>
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<tbody>
<tr>
<td>a. Heating, ventilation, air conditioning system (e.g. chillers, window units, redundancy of systems such as connection to back-up power)</td>
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<td>b. Potable and non-potable water systems (e.g. cooling towers)</td>
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<td>c. Electricity supply from the local service provider or alternative energy sources (e.g. electricity, back-up generators, fuel supply, redundancy of systems)</td>
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<td>d. Functioning of machines, equipment and computers (e.g. equipment to diagnose and treat patients, surgical equipment, computers that store medical records)</td>
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<td>e. Communication channels (e.g. telephones, computers)</td>
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<td>f. Structural elements (e.g., pillars, floors, roofs)</td>
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<td>g. Non-structural elements (e.g., windows)</td>
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</table>
RISK MANAGEMENT TO REDUCE CLIMATE RELATED RISKS

• 45 questions
  ➢ Procurement of health care resources and supplies
  ➢ Notifications, monitoring and surveillance
  ➢ Clinical risk management
  ➢ Infrastructure and systems risk management
  ➢ Energy supply and use
RISK MANAGEMENT TO REDUCE CLIMATE RELATED RISKS

37. Do you participate in activities (e.g. drills, committee meetings, planning exercises) in the community that enhance your ability to respond to a community wide, climate-related disaster?

☐ Yes
☐ Somewhat
☐ No
☐ I don't know

COMMENTS:
43. One or more climate-related emergencies or disasters may affect critical resources at your health care facility. Do you currently have sufficient (according to accreditation standards for a health care facility of your size and type of care) essential supplies and resources to continue to provide care during one or more climate-related emergencies? Please respond according to essential back-up supplies listed below.

<table>
<thead>
<tr>
<th>Vulnerability Area</th>
<th>Yes</th>
<th>Somewhat</th>
<th>No</th>
<th>I don’t know</th>
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<tbody>
<tr>
<td>a. Medications, treatments, drugs, pharmaceuticals, vaccines, antibiotics</td>
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<tr>
<td>b. Medical equipment and technical devices</td>
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<tr>
<td>c. Food</td>
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<td>d. Water</td>
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<td>e. Energy / Power</td>
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<td>f. Non-medical materials / suppliers to care for patients (e.g. bed linens, cleaning supplies)</td>
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<td>g. Other (please specify):</td>
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</table>
Building Capacity to Adapt to Climate Change

66. Many jurisdictions in Canada have begun to address climate change by developing climate change plans and undertaking vulnerability assessments. Some of these initiatives may have roles for health care facilities or information that is pertinent to them. Is your health care facility aware of climate change adaptation or mitigation initiatives in your jurisdiction and how your health care facility could be involved?

☐ Yes
☐ Somewhat
☐ No
☐ I don't know

Comments:
Energy efficiency programs may include a variety of initiatives. Energy efficient initiatives contribute to resiliency by reducing future climate-related health risks (through greenhouse gas emission reductions) and reducing reliance on energy on a regular basis (to be better prepared when power supply is disrupted). Does your health care facility capitalize on any of the following energy related resiliency opportunities? Please respond to the items below.

<table>
<thead>
<tr>
<th>Resiliency Activity</th>
<th>Yes</th>
<th>Somewhat</th>
<th>No</th>
<th>I don't know</th>
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<tbody>
<tr>
<td>a. Conduct energy audits</td>
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<td>b. Set energy or greenhouse gas reduction targets</td>
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<td>c. Monitor or track energy use</td>
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<td>d. Evaluate energy reduction strategies</td>
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<tr>
<td>e. Monitor cost-savings, greenhouse gas emission reductions</td>
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<td>f. Educate staff, patients and visitors about energy reduction strategies (energy awareness campaigns), perhaps as part of an energy conservation program</td>
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<td>g. Design buildings using green design best practices (e.g. Leadership in Energy and Environmental Design), standards or guiding principles</td>
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<td>h. Install energy efficient equipment</td>
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<tr>
<td>i. Install lighting control systems to minimize energy consumption (e.g. lights shut off automatically or are not used during daylight hours or in areas of the facility unused)</td>
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<td>j. Investigate the possibility of diversifying energy sources in your health care facilities jurisdiction (e.g. solar power, photovoltaic power, hydro-electric)</td>
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Health Care Facility Climate Change Resiliency Tool Kit

Part 3: Best Practices & Resources
Sample Resources

- Resilience Strategies of Healthcare Facilities: Present and Future (Link)
- Nebil Achour & Andrew D.F. Price, Loughborough University (Link)

The purpose of this paper is to explore UK healthcare resilience strategies, define gaps and provide suggestions based on international best practice. The paper provides a significant contribution in terms of reducing the fragmentation of healthcare resilience-related work done previously; evidence of better practice from local and international facilities which will help in enhancing the resilience of healthcare facilities in the UK and elsewhere in the world.

- Type: Article • Availability: Free Online • Geographic Focus: UK • Publication: 2010
- Key Topics: disaster preparedness, infrastructure
Sample Resources

- Emergency Water Supply Planning Guide for Hospitals and Health Care Facilities ([Link](#))
- American Water Works Association ([Link](#)) & Centers for Disease Control and Prevention ([Link](#))

The objective of this Emergency Water Supply Planning Guide for Hospitals and Health Care Facilities is to help health care facilities develop a robust Emergency Water Supply Plan as part of its overall facility Emergency Operations Plan and to meet the published standards set forth by the Joint Commission and the Center for Medicare and Medicaid Services. The guide is intended for use by any health care facility regardless of its size or patient capacity.

- Type: Best Practices Resource  ●  Availability: Free Online  ●  Geographic Focus: USA  ●  Publication: 2009
- Key Topics: emergency management, supply chain, water
Usefulness of the Toolkit - 1

- David MacKenzie, VP – Operations, Guysborough Antigonish Strait Health Authority.
  - “Participating as a pilot site has been an invaluable experience for our team. The toolkit challenged how we are planning for events and with the recent experience of Sandy in New Jersey and New York, reinforced our conviction in these strategies. Extreme weather events are happening more frequently and can be catastrophic for communities that don’t understand or prepare appropriately.”
Robert Barss, Manager, Facility Services, South Shore District Health Authority and CHES Maritime Chapter

“As the managers of health care’s infrastructure, CHES Maritime is excited to help the Coalition and its partners develop the assessment tool and explore opportunities to make our hospitals more resilient and more sustainable in the face of growing climate change and worsening climactic incidents. It is incumbent upon us to be as prepared as possible and to be ready to deliver the best possible patient care from a safe and functional healing facility during times of disaster.”
4. Questions and Discussion

Linda Varangu,
Canadian Coalition for Green Health Care
5. Close

Linda Varangu,
Canadian Coalition for Green Health Care
THANK-YOU

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*The Nova Scotia Climate Change Adaptation Fund*

http://climatechange.gov.ns.ca/content/adaptation_fund
THANK-YOU

For additional information please contact:

Linda Varangu:  Linda@greenhealthcare.ca
Dr. Peter Berry:  Peter.Berry@hc-sc.gc.ca
Canadian Coalition for Green Health Care

is Canada’s premier green health care resource network; a national voice & catalyst for environmental change

www.greenhealthcare.ca