



Health
Canada

Santé
Canada

*Your health and
safety... our priority.*

*Votre santé et votre
sécurité... notre priorité.*

Health Adaptation to Extreme Heat Events

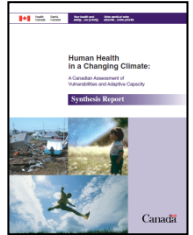
American Meteorological Society Forum
Washington D.C.
April 2, 2014

Peter Berry, Ph.D.
Climate Change and Health Office
Health Canada



Canada

Health Risks in Canada from Climate Change



Dangerous travelling conditions

Changes in drinking water quality and quantity

Food security - changing animal distributions

Health impacts from more severe storms

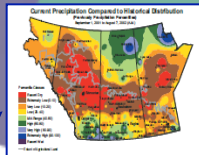
Expansion of Lyme Disease vector

Respiratory illnesses from forest fires

Water-borne diseases from floods

Psychosocial impacts from droughts

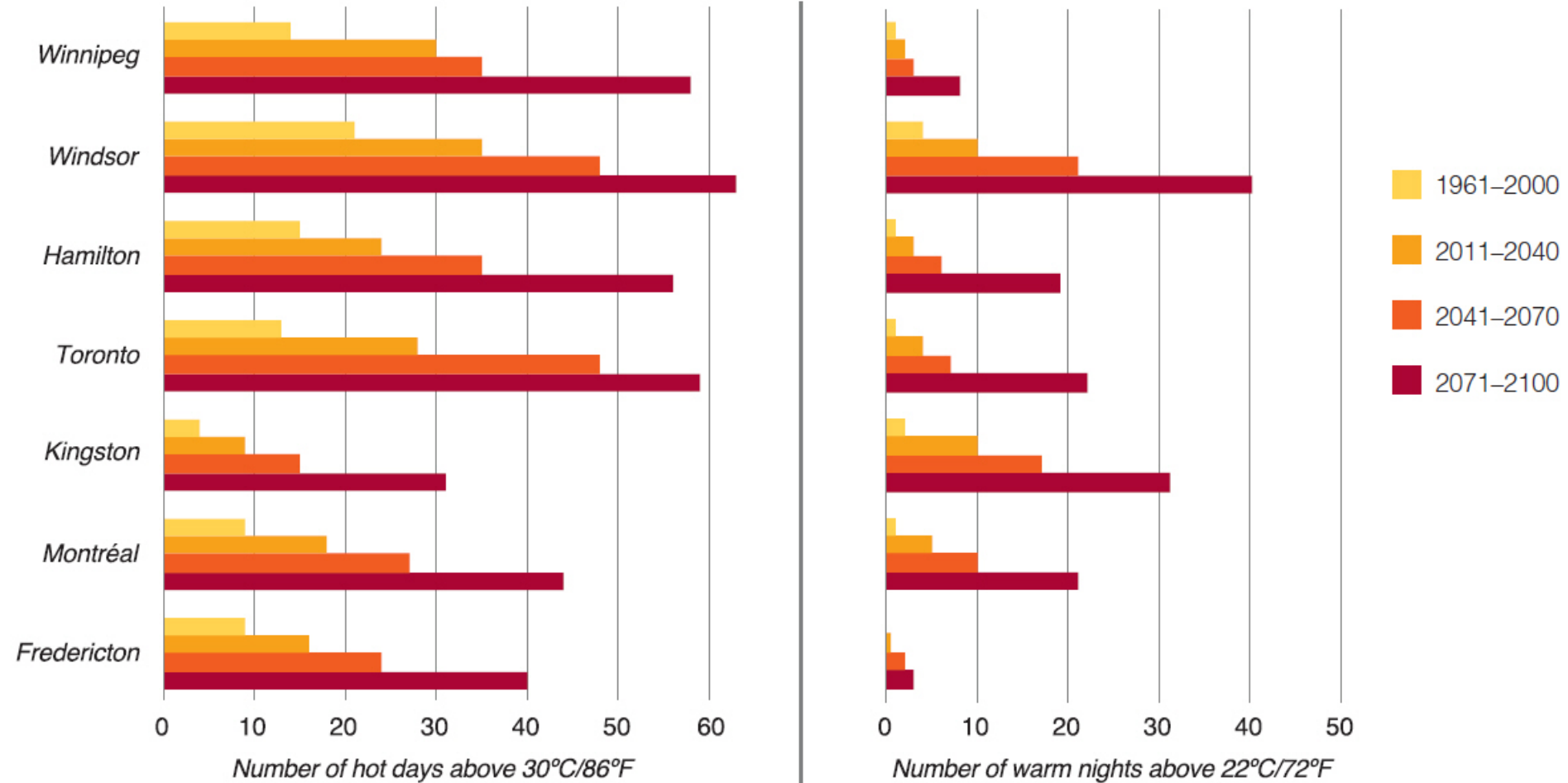
Permafrost melt damaging infrastructures



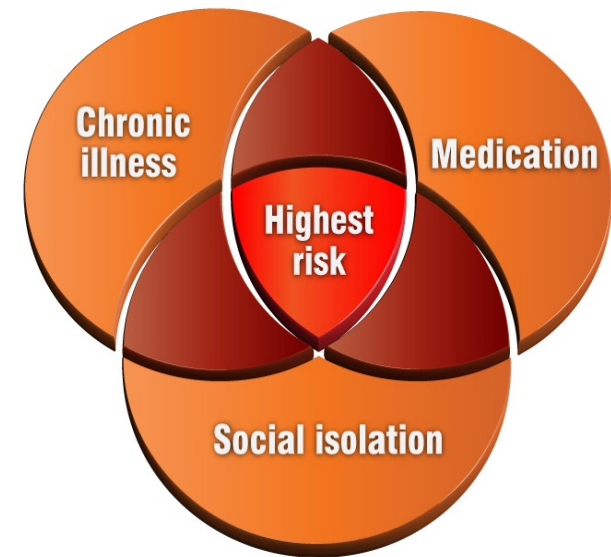
Heat-related illnesses and deaths



Heat Projections for Select Canadian Cities



Factors that Increase Vulnerability



Health Canada, 2011

Toward Health Adaptation Action

Recognition

Increased awareness



Groundwork

Assessments

Adaptation research

Conceptual tools

Stakeholder networking

Policy recommendations



Adaptation Action

Legislation

Departmental development

Public outreach

Surveillance/monitoring

Infrastructure/technology

Program evaluations

Financial support

Medical interventions



EM Action With and Without “Adaptation”

EM Action

Hazard Risk
Vulnerability Assessment

Disaster mitigation

Disaster planning

Table top exercises

Surveillance

Response and recovery

Increasing planning capacity



EM + Adaptation

HRVA integrating climate change + CC assessments

Disaster mitigation informed by CC drivers (e.g, UHI)

Disaster plans – informed by CC (eg., simultaneous events)

TTX with CC scenario

Monitoring new health risks

Activate surge capacity

Partners with CC knowledge, staff aware of CC risks

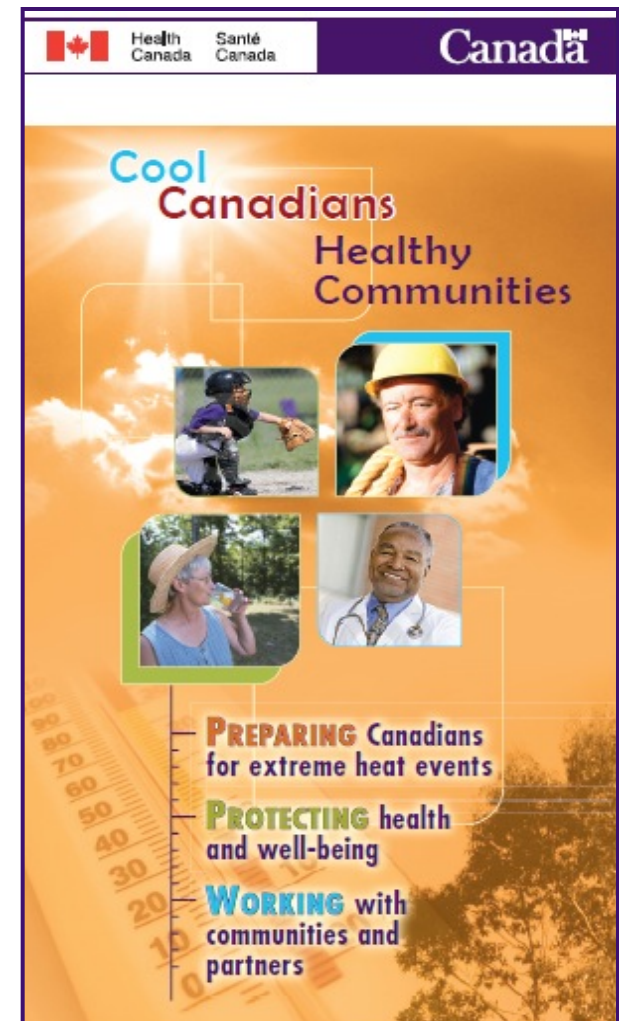


Developing Heat Resilient Communities and Individuals

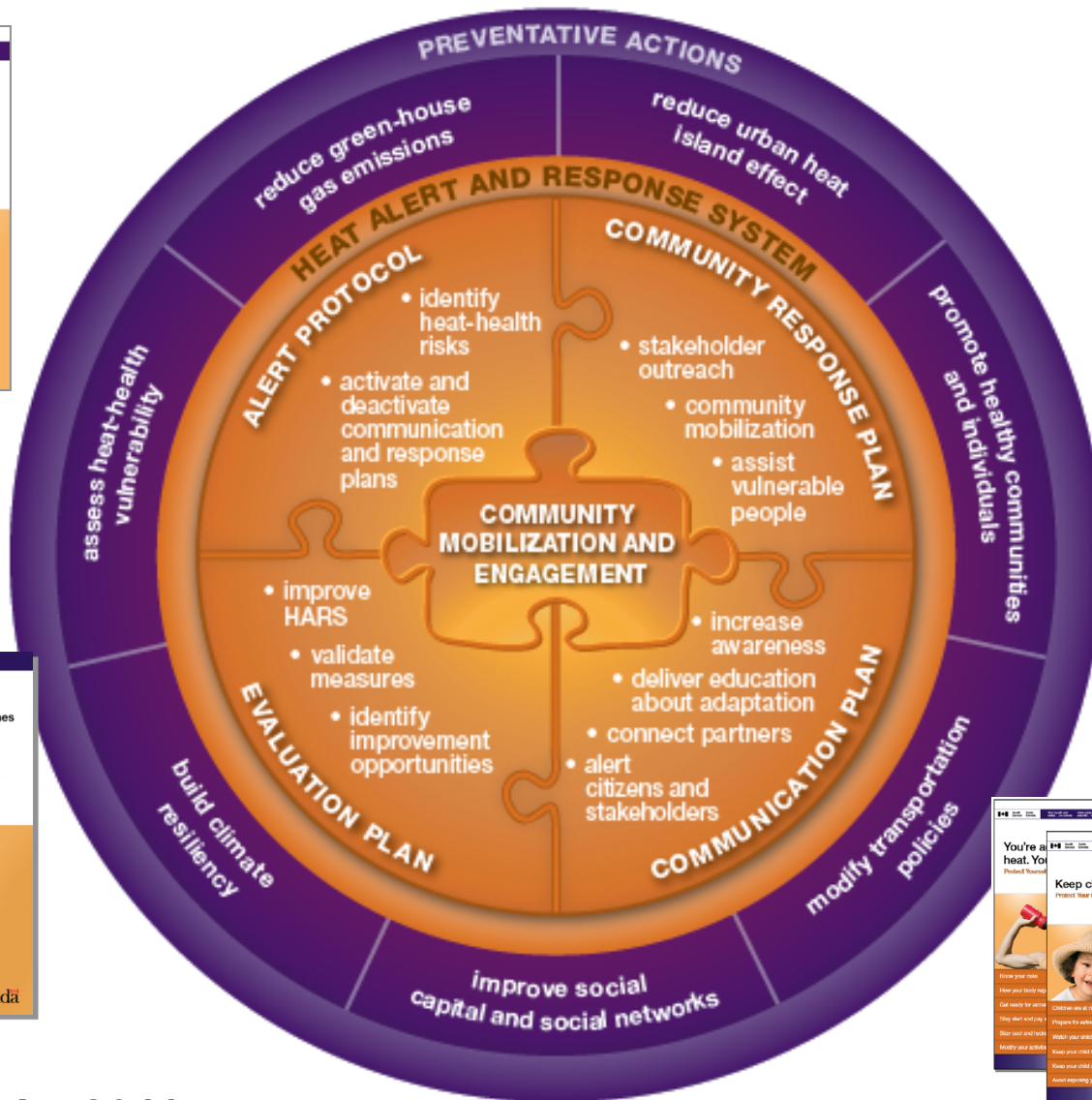
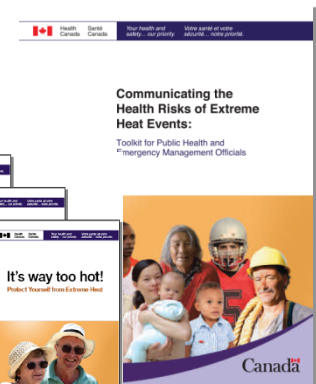
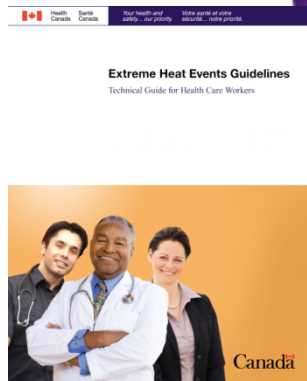
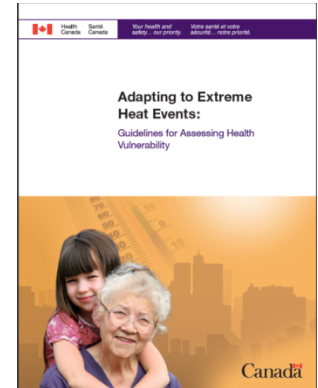
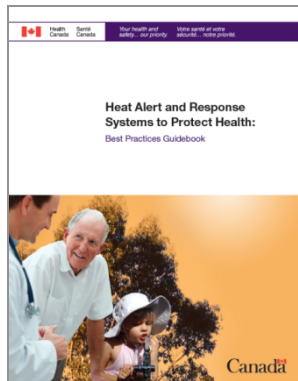
Goal: In partnership with provinces and communities, expand HARS to increase the resilience of Canadians to the health risks of extreme heat events

Four areas of activity:

- i) Heat health messaging to support personal adaptation
- ii) Heat-Health Science: Address critical knowledge gaps
- iii) Clinical training: Enable health professionals to better advise, diagnose and treat their clients
- iv) Expansion of HARS to communities across Canada



Heat Alert and Response Systems



Best Communication Practices



Audience



Message



Message delivery

Perceptions

Challenges

Heat-vulnerabilities

Needs

Clear

Tailored

**Address barriers
to action**

Media

Interpersonal networks

Community & group events

Collaborative

Timing

Adaptation



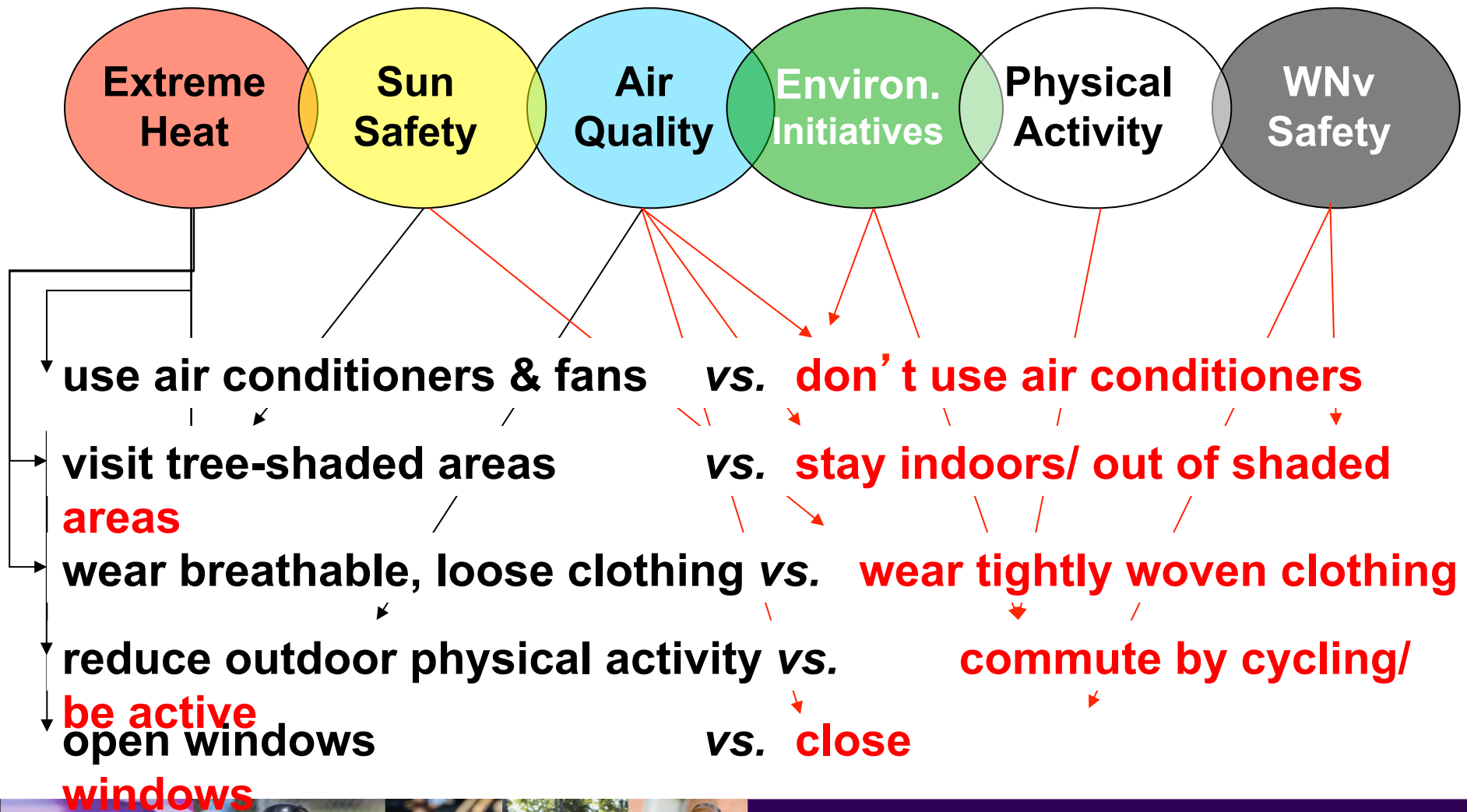
Challenges - Addressing Barriers to Adaptation

Examples of Challenges Seniors Face in Adapting to Extreme Heat Events

Heat-Vulnerable Groups	Examples of Challenges
Older adults ¹¹	<ul style="list-style-type: none">• Physiological characteristics that may contribute to increased vulnerability to heat:<ul style="list-style-type: none">› reduced thirst sensation¹²⁷› reduced fitness level› reduced sweating ability¹²⁸› increased susceptibility to chronic dehydration¹²⁷• Visual, cognitive, and hearing impairments• Agility and mobility challenges• Differing perceptions of risks and vulnerabilities based on life experiences• Reduced literacy• Social isolation



Challenges - Contradictory Messages



Challenges – Met Data to Protect Health

Potential
UHI effect in
Edmonton,
Alberta

August 18,
2008

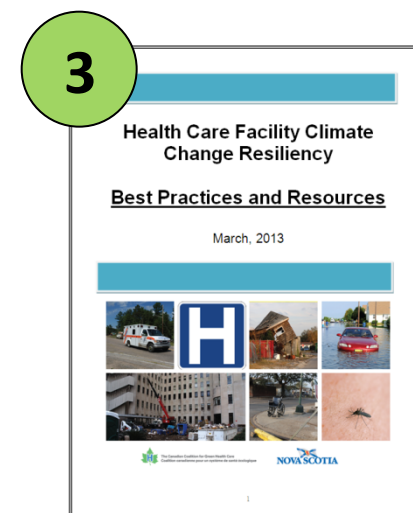
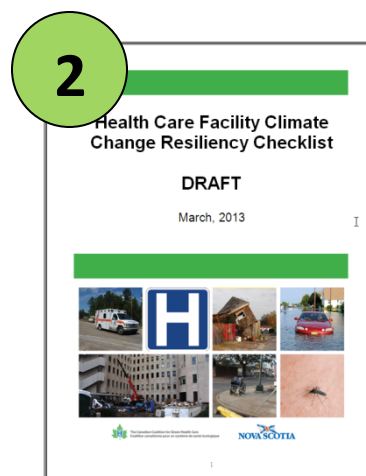
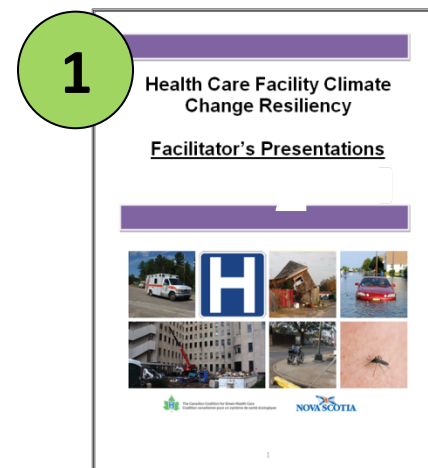
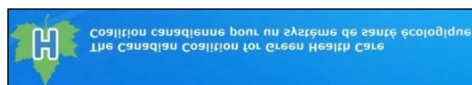


Health Care Facility Resiliency Toolkit

1) Facilitator Presentation

2) Health Care Facility Resiliency Checklist

3) Best Practices and Resources



THANK-YOU

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