Cool North Shore Presentation

Dr. Mark Lysyshyn, Medical Health Officer

November 25, 2014
Outline

• Extreme Heat Surveillance and Response
• Forest Fire Smoke Surveillance
• Upgrading Water Treatment Systems
• Improving the Built Environment
• Collaborating on Food Security
Extreme Heat Surveillance and Response
Summer 2009

Deaths

Maximum Temperature

July

August

S. Henderson BC CDC 2014
Recommendation:

A heat health emergency should be called for tomorrow when the average of today’s 14:00 measured temperature and tomorrow’s forecast high equals or exceeds:

34°C at Abbotsford airport

OR

29°C at Vancouver airport

The emergency should be sustained for as long as either criterion persists.
Heat Alert System

If temp is projected to exceed 32°C:
- Environment Canada issues a Special Weather Statement
- VCH and FH Medical Health Officers issue a hot weather news release which includes tips the public can use to beat the heat

If temp is projected to exceed 34°C:
- Environment Canada issues a Heat Warning
- Municipal heat response plans are activated
- Plans include education for the public and vulnerable populations, information about cooling centres and water stations, considerations for outdoor events including water availability and schedule changes
Forest Fire Smoke Surveillance
Forest Fires Trends

Hectares

Asthma Physician Visits 2003

S. Henderson BC CDC 2014
Salbutamol Dispensations 2010

[Graph showing the number of salbutamol dispensations and PM2.5 levels over the months of June, July, August, and September in 2010.]

S. Henderson BC CDC 2014
Exposure Metrics

- Measurements averaged from monitor Smithers St Josephs, Terrace BC Access Centre 60
- Estimates from the BCCDC forest fire smoke exposure model
- Predictions from the 48-hours in advance BlueSky smoke forecast

PM2.5

Jul-07, Jul-14, Jul-21, Jul-28, Aug-04, Aug-11, Aug-18, Aug-25, Sep-01

S. Henderson BC CDC 2014
BC Asthma Monitoring System (BCAMS)

Asthma Physician Visits for HSDA Northern Interior (#52)
Update for week of Aug 23 to Aug 30, 2014

Grey stripes indicate weekends and holidays, when visits are lower
Normal: asthma visits within expected range
Unusual: asthma visits above 95th percentile of expected range
Rare: asthma visits above 99.9th percentile of expected range
Expected asthma visits

Daily average from available monitors
Estimates from the BCCDC model
Predictions from BlueSky (48-hours in advance)
BC Asthma Monitoring System (BCAMS)
Upgrading Water Treatment Systems
Number of weeks in a year with precipitation > 90\textsuperscript{th} percentile of historical (176 mm/week) based on RCP 8.5.
Gastrointestinal Illness

Reported Cases of Giardiasis and Cryptosporidiosis in Fraser Health Authority, 2000-2012

Average number of cases = 268 per year

Galanis et. al. 2014
Drinking Water Systems

Drinking Water Source and Management by Land Parcel in Fraser Health, 2005-2009

- Source = home tap water
Results: Non municipal and municipal systems

Non-municipal drinking water systems

Weeks since heavy precipitation

Galanis et. al. 2014
Results: Non Metro Vancouver and Metro Vancouver

No effect

Weeks since heavy precipitation

Non Metro Vancouver municipal systems

Increase

Weeks since heavy precipitation

Metro Vancouver system

Galanis et. al. 2014
Seymour- Capilano Filtration Plant

AERIAL OVERVIEW

8. BACKWASH EQUALIZATION

7. TO YOUR TAP

6. UNDERGROUND CLEARWELLS & POST TREATMENT

5. UV DISINFECTION

4. FILTRATION

3. FLOCCULATION

2. PRE-TREATMENT

1. INLET BLENDING

9. & 10. BACKWASH TREATMENT

11. THICKENER

12. BELT FILTER PRESSES

13. ACTIFLO™ TREATMENT

Vancouver Coastal Health
Promoting wellness. Ensuring care.
Results: Metro Vancouver System

Weeks since heavy precipitation

Metro Vancouver drinking water system

Galanis et. al. 2014
Improving the Built Environment
A body of research and evidence links the places people live with health outcomes.

Vancouver Coastal Health and municipalities on the North Shore have agreed to work together to ensure health is considered in the community planning process.
Planning Principle 1: Healthy Neighbourhood Design

Guiding principles:
• Enhance neighbourhood walkability
• Create mixed land use
• Build complete and compact neighbourhoods
• Enhance connectivity with efficient and safe networks
• Prioritize new developments within or beside existing communities

EVIDENCE-BASED HEALTH IMPACTS
• Increased physical activity and productivity at work
• Improved mental health, social cohesion and quality of life
• Decreased obesity and premature mortality
Planning Principle 2: Healthy Transportation Networks

Guiding principles:

• Enable mobility for all ages and abilities
• Make active transportation convenient and safe
• Prioritize safety
• Encourage use of public transit
• Enable attractive road, rail, and waterway networks

EVIDENCE-BASED HEALTH IMPACTS

• Increased physical activity
• Improved social connectivity, mental health and quality of life
• Decreased injuries, obesity, respiratory disease and premature mortality
Planning Principle 3: Healthy Natural Environments

Guiding principles:
• Reduce urban air pollution
• Mitigate urban island heat effect
• Expand natural elements across the landscape
• Preserve and connect open space and environmentally sensitive areas
• Maximize opportunities to access and engage with the natural environment

EVIDENCE-BASED HEALTH IMPACTS
• Improved physical health, cognitive health, exposure to vitamin D, social wellbeing and spiritual wellbeing
• Decreased heat related illness and mortality, cardiovascular and respiratory illness and mortality
Planning Principle 4: Healthy Food Systems

Guiding principles:
• Enhance agricultural capacity
• Increase access to healthy foods in all neighbourhoods
• Improve community-scale food infrastructure and services

EVIDENCE-BASED HEALTH IMPACTS
• Improved diet quality and, food and coping skills
• Increased social skills and social supports, enjoyment of food and community empowerment
• Decreased obesity and diet-related illness
Planning Principle 5: Healthy Housing

Guiding principles:

• Ensure adequate housing quality for all segments of society
• Increase access to affordable housing through provision of diverse housing forms and tenure types
• Prioritize housing for the homeless, elderly, low income groups, and people with disabilities
• Site and zone housing developments to minimize exposure to environmental hazards

EVIDENCE-BASED HEALTH IMPACTS

• Improved general health, food security, mental health and quality of life
• Decreased stress & depression, exposure to environmental hazards and mortality
Planning Principle 6: Healthy Communities

Guiding principles:

• Apply an equity and inclusion lens to all planning
• Consider and address the social determinants of health, such as education, income, social supports, health services, among many others
• Support capacity building in individuals, organizations, and sectors
• Work collaboratively on activities that lead to the integration of efforts to strengthen community health, well-being and development

EVIDENCE-BASED HEALTH IMPACTS

• Improved general health, mental health, community engagement, social cohesion, social connectedness and quality of life for all
• Decreased illness and mortality
Collaborating on Food Security
North Shore Food Charter

• Outlines a vision for creating an integrated food system for the North Shore

• Articulates shared community principles related to food production, distribution, access, consumption, processing and waste handling

• Principles:
  • Health, Access and Equity
  • Environmental Responsibility
  • Government Leadership and Collaboration
  • Economic Vitality
  • Community Culture and Education
North Shore Community Food Charter

This Charter outlines a vision and principles around an integrated food system for the North Shore. It articulates shared community principles related to food production, distribution, access, consumption, processing and waste handling.

Vision

The North Shore will be a place where:
- Food is consumed in a viable manner at every stage of the food system;
- All people are able to access food in a dignified manner, free from anxiety, stress and personal embarrassment;
- The environment is valued and protected from adverse impacts of the food system;
- Food and food cultures are celebrated.

Principles

1. Health, Access and Equity
Health is vitally connected to the food we consume. Healthy communities are built, in part, when healthy choices are available to everyone. We strive for everyone to have access to food choices that:
- Are safe, healthy, minimally processed, and not unnecessarily modified;
- Are high quality across all North Shore jurisdictions;
- Are affordable for everyone;
- Are available with dignity and without barriers to all North Shore jurisdictions.

2. Environmental Responsibility
The “food system” comprises a complex continuum from seed to plate and back to the earth that has a significant impact on the environment. We strive to:
- Support practices that protect and enhance natural ecosystems (land and water) through all stages of the food system;
- Reduce, recycle and repurpose food to the greatest extent possible;
- Minimize the harmful environmental impact of food production and consumption (including transportation, packaging, processing, etc.) wherever possible.

Food security is an issue that cannot be addressed by a single governing entity on its own. North Shore communities will collaborate with regional, provincial and national governments in advocating on issues that affect community food security.

1. Health, Access and Equity
We strive to:
- Inform the public about food security initiatives and support initiatives being pursued in other jurisdictions;
- Advocate around food system issues regionally, provincially and nationally;
- Consider and promote food security in the development of regulations and policies.

4. Economic Vitality
Local food enterprises enhance the local economy. Every step of the food system from food production to processing, retail, preparation, consumption, composting and repurposing presents opportunities to strengthen the economy.

We strive to:
- Strengthen the local food sector’s growth and development;
- Attract and promote innovative and viable food-centric enterprises;
- Create jobs in our community by encouraging local food enterprises.

5. Community Culture and Education
Food brings people together and creates opportunities for people to share their food skills, traditions and knowledge contributing to a vibrant community.

We strive to:
- Promote the connection between food and mental, physical and spiritual health;
- Celebrate and support food cultures;
- Support information sharing, education, and training for children and adults that builds awareness, skills and capacity for food literacy.
Questions?