This brochure is an executive summary of the
Moving Toward Climate Resilient Health Facilities *report series.*

Vancouver CoastalHealth

Investing in Climate Resilient Health Facilities & Operational Services

Extreme weather events **multiply and amplify** the impacts of climate change on health service delivery. Recent events have shown that health facilities are at higher risk of **strains, failures, or closure** during record-breaking wildfires, prolonged heat waves, and powerful windstorms. **Cascading impacts** on patients, health staff, and communities can be high.

Health authorities can ensure that major investments in patient care are able to weather **unexpected** events with **climate resilient facility design and operations**. Health system collaboration among facilities, public health, and emergency management is key to preparing communities for **our new climate reality** while building resilience for the organization as a whole.

> CLIMATE SHOCKS are acute events that can disrupt health service delivery with unexpected demands and complications.

> CLIMATE STRESSES are slow-moving disasters that can weaken the fabric of health facilities and systems over time.

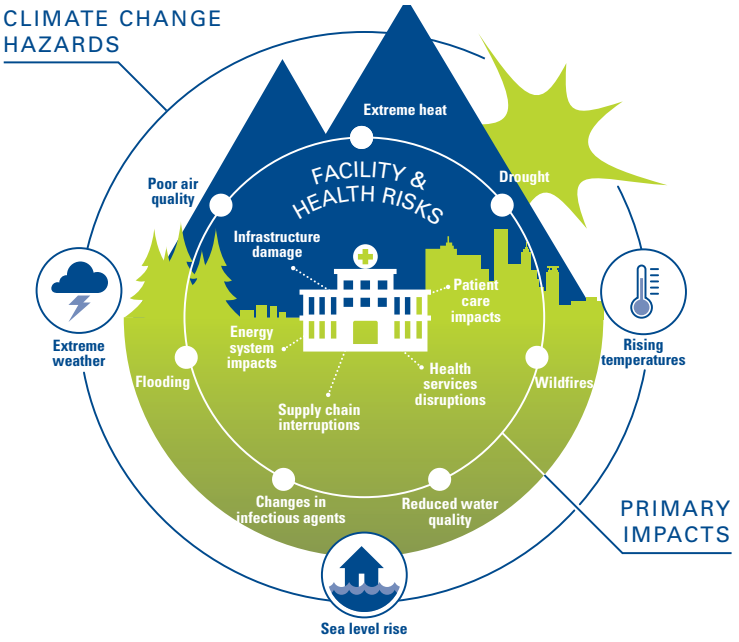

Figure 1: Climate hazards can lead to primary impacts, including extreme heat, wildfires, and poor air quality. Cascading impacts on buildings and infrastructure can disrupt health services and affect patient care.
Credit: Ministry of Health and the BC Climate Action Secretariat.

VANCOUVER COASTAL HEALTH & OUR FUTURE CLIMATE

Climate science is clear that greater **variations, anomalies, and extremes** in temperature and precipitation are **highly likely** to occur. For example:

- Increasing daytime temperatures will be experienced at all facilities; by 2080, the number of days warmer than 25°C will be four times greater than in the past, requiring an increase in operational costs for cooling.
- Days above 30°C will increase dramatically at every site; facilities may experience a surge in patient visits due to heat stress.
- Warm nights will increase significantly by 2080; the ability of patients to heal may be reduced.
- More frequent and intense storms will occur, and flood risks will increase with 1m sea level rise by 2100.

Future climate projections can differ significantly within the region, and over time.

UNDERSTANDING THE RISKS TO PATIENT CARE & FACILITIES

Patient care and health facilities will experience a broad range of expected and unexpected climate impacts in our new climate reality.

More Hospital Visits

The impacts of climate hazards on facilities are expected to affect the quality of care and service we are able to provide.

- Flooding, wildfires, and drought can lead to an increase in hospital visits by both vulnerable and general populations due to increases in disease, illness, and injury.
- Transportation and access disruptions during such events can challenge the delivery of community health care, resulting in more hospital visits.
- Community surge during hazard and extreme events can increase the load on supplies and systems and reduce frontline staff's ability to provide care.

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UNDERSTANDING THE RISKS (CONT.)

Health Facility Damage and Deterioration

Building structures and systems can be challenged by extreme weather conditions to meet greater demands.

- Rises in air contaminants from heat-related ozone, wildfire activity, and other sources can infiltrate into facilities through building systems or envelopes. Where ventilation systems cannot maintain good indoor air quality, patient care and working conditions will be impacted.
- As temperatures become increasingly variable, higher operational costs (e.g., energy costs and staff overtime), increased wear on equipment, and unexpected equipment purchases to supplement heating and cooling needs are likely.
- Current emergency preparedness requirements for power, cooling, water, and food will likely be inadequate during future emergencies.
- Stormwater runoff and flooding during high rainfall events can threaten building integrity and compromise sanitary conditions.

Off-site Infrastructure and Resource Demands

Health facilities are dependent on the municipalities and regions in which they operate.

- Bacterial outbreaks can increase where the capacity of municipal sewer infrastructure is not sufficient for higher volumes of water, including rain.
- Damage to utilities and roads from extreme events or prolonged exposure can cut off supply chains and health service delivery.
- Future shortages in regional power and water resources will likely strain facility management.

"To construct [hospitals] today that are not resilient to climate change represents a poor investment and condemns generations of users to misery."

— THE LANCET JOURNAL OF PUBLIC HEALTH
"Heatwaves and health," Vol 392 August 4, 2018, www.thelancet.com

REDUCING THE RISKS TO PATIENT CARE & FACILITIES

Vancouver Coastal Health can take a strategic and cost-effective approach to reducing climate risks and building resilience by developing standards and guidelines for climate resilient facilities. Investments in facilities—new and existing—are investments in our patients and communities.

Climate Risk Assessments and Reports

We can invest in climate risk assessments that inform early planning and design of new and existing projects, and in climate risk reports on actions, plans, and progress to monitor how we are reducing impacts to patient care.

Net Zero Emissions and/or Energy Assessments

We can invest in a better understanding of embodied and operational carbon to inform our greenhouse gas (GHG) emissions reductions and energy management plans.

Health System Climate Resilience

We can invest in a whole-systems approach by working with public health, emergency management, risk management, insurance, and finance to identify and leverage opportunities to address climate risk gaps.

LEADERSHIP & LEGISLATION

In 2016, the Ministry of Health and the BC Climate Action Secretariat highlighted[1] how cascading impacts on critical infrastructure—including health facilities, power, water, and roads—can disrupt health service delivery and patient care (Figure 1). In 2018, the updated **BC Climate Change Accountability Act** positioned climate risk management alongside greenhouse gas emissions reductions. The messages are clear: *Reducing climate risks is critical for health care and those it serves; reducing greenhouse gas emissions in parallel is critical for climate resilience*.

Vancouver Coastal Health is already mandated or committed to:

- Demonstrate public sector leadership, and achieve new GHG reductions targets, as per CleanBC (2018)
- Report climate risks and actions to reduce risks in our 2018 Carbon Neutral Action Reports
- Conduct net zero energy assessment for capital projects, as per the Ministry of Health (2018)
- Produce 10-year emission reduction and adaptation plans, as per the Climate Leadership Plan (2016)
- By 2022, conduct an integrated climate and health vulnerability assessment, and develop an integrated climate adaption plan, with a Health Canada grant.

More information is available in the Moving Toward Climate Resilient Health Facilities for Vancouver Coastal Health *report.*

1 https://www2.gov.bc.ca/gov/content/environment/climate-change/adaptation