

Creating Safe Spaces in Unprecedented Circumstances - Extreme Heat

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Resilience
BC Housing

Dr. Michael Schwandt Medical Health Officer Vancouver Coastal Health We are speaking today on the traditional territory of nations including the Mississaugas of the Credit, the Anishnabeg, the Chippewa, the Haudenosaunee and the Wendat peoples.

Presentation Outline

1. Health Perspective

BC Housing's Extreme Heat Response





Vancouver Coastal Health operates on the unceded territories of the Heiltsuk, Kitasoo-Xai'xais, Lil'wat, Musqueam, N'Quatqua, Nuxalk, Samahquam, Sechelt, Skatin, Squamish, Tla'amin, Tsleil-Waututh, Wuikinuxv, and Xa'xtsa First Nations.





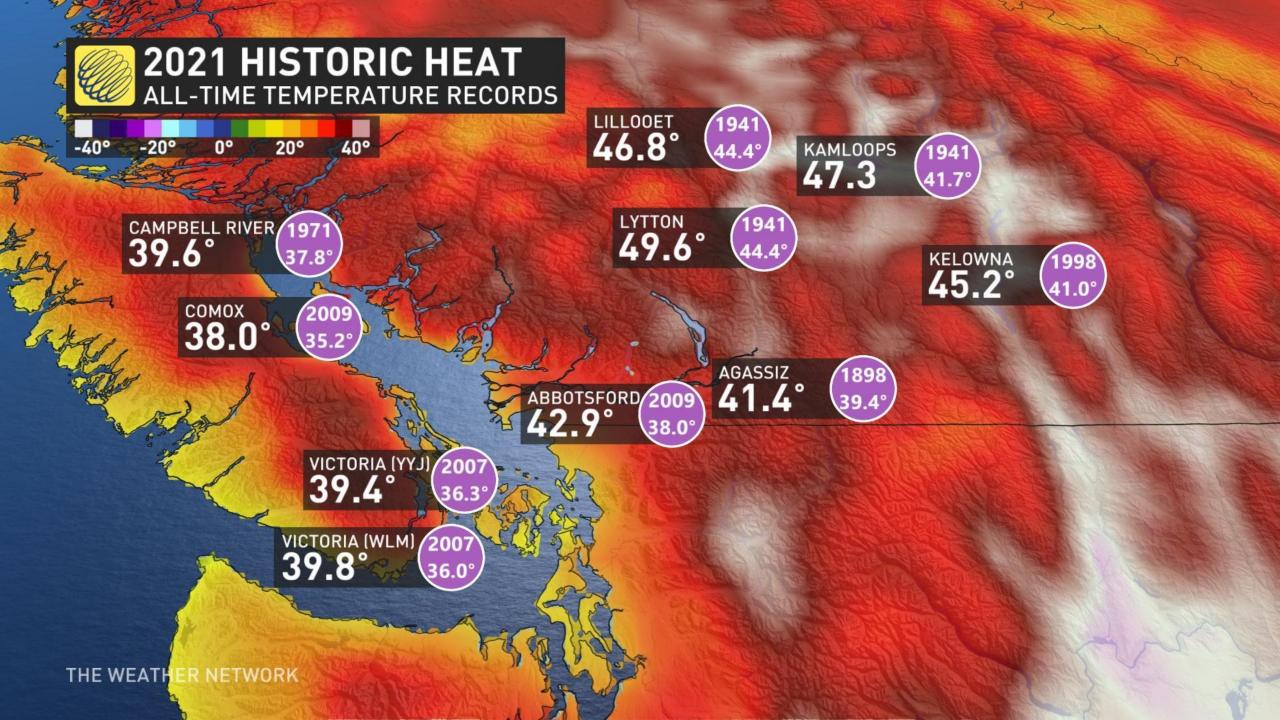
Health perspective

- 1. 2021 BC Heat Dome: Health impacts and inequity during an extreme weather event
- 2. 2022 Health Preparation and Response, 2022 and onward: Actions, partnership and advocacy



2021 BC Heat Dome: Health impacts and inequity during an extreme weather event





Coroner's report on heat wave that led to 619 deaths says B.C. needs to be better prepared for what's next

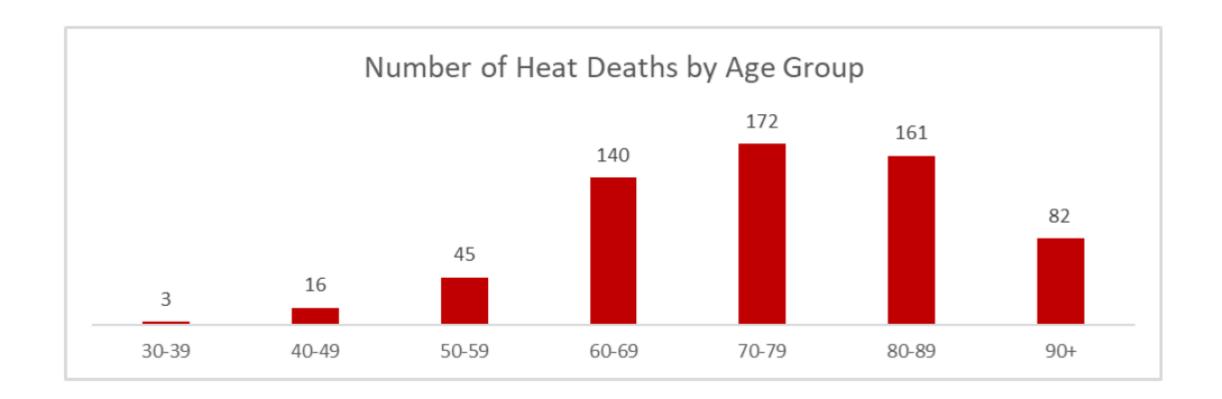
JUSTINE HUNTER > AND ANDREA WOO >

VICTORIA, VANCOUVER
PUBLISHED JUNE 7, 2022
UPDATED JUNE 8, 2022

Extreme Heat and Human Mortality: A Review of Heat-Related Deaths in B.C. in Summer 2021

Report to the Chief Coroner of British Columbia

Release Date: June 7, 2022





Although this report lists many statistics, each data point is an individual life. The people who died were people who, for myriad reasons, were overcome by the effects of extreme heat. Most lacked access to cooler buildings or air-conditioned spaces. Many were older adults who had chronic health conditions. Many communicated that they were feeling unwell and were having difficulty managing in the hot temperatures. Many were also connected to health services and other resources prior to their death.

The BCCS investigative findings showed that elderly, socially-isolated people were at a higher risk of heat-related mortality. Many of the deceased lived in single family dwellings. Building practices such as adding suites to homes could potentially reduce social isolation.

Data matched with the Ministry of Health's Chronic Disease Registry found that 91% of decedents were assigned to at least one chronic disease registry. The most common registry that decedents belonged to was hypertension (71%), mood and anxiety disorders (60%), depression (54%), diabetes (37%), and osteoarthritis (33%) (see Appendix 2, Figure 4). Compared with the B.C. population 65 years and over, a higher percentage of decedents were on schizophrenia, substance use disorder, epilepsy, chronic obstructive pulmonary disease, depression, asthma, mood and anxiety disorders, and diabetes registries.

Heat-related mortality during the 2021 BC Heat Dome

Risk factors

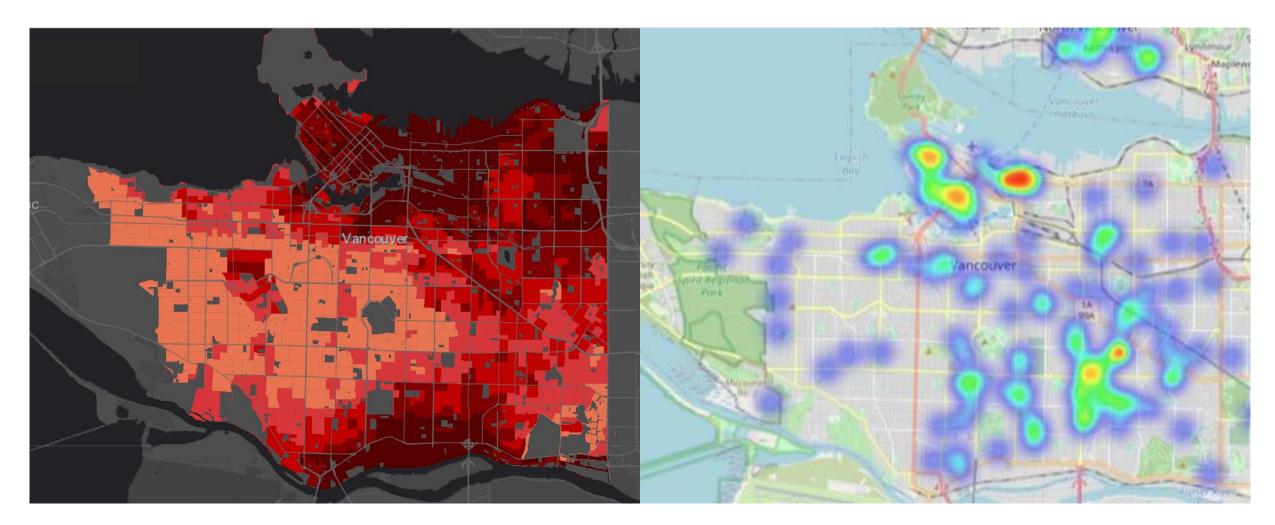
- Old age
- Deprivation
- Isolation
- Mental illness
- Substance use
- Pre-existing illnesses

Protective factors

- Privilege
- Neighbourhood green space
- Admission to health care facility (e.g. long-term care homes)

VCH-UBC Heat Vulnerability Mapping, 2020

VCH Emergency Room Visits, 2021 Heat Dome





2021 BC heat dome: Heat related deaths and *place of injury*

| Place of Injury | Count | Percent |
|---------------------------------------|-------|---------|
| Private Residence - Multi-unit | 242 | 39.1% |
| Private Residence - Detached | 210 | 33.9% |
| SRO/Social Housing/Supportive Housing | 62 | 10.0% |
| Trailer Home/Mobile Home/RV/Camper | 40 | 6.5% |
| Senior/Long-Term Care Home | 40 | 6.5% |
| Outside | 13 | 2.1% |
| Other Residential | 12 | 1.9% |
| Total | 619 | |



2022 public health perspective: Actions, partnership and advocacy



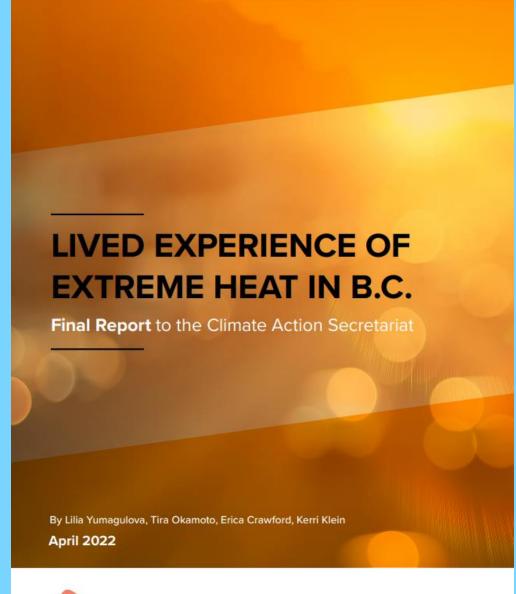
The Panel identified three key areas to reduce heat-related deaths:

A coordinated provincial heat alert response system

Ensuring vulnerable populations are identified and supported during extreme heat events

Implementing prevention and longer-term risk mitigation strategies

Extreme Health Death Panel Report, BC Coroners Service 2022







Communications and coordination

"There was a lack of awareness about how to recognize the signs of heat injury, lack of awareness about cooling shelter locations, lack of awareness to check on your isolated elderly neighbour, lack of awareness about when to seek out help." "It felt as though there was not much planning, [it was] all hands-on deck, and responding minute by minute."

(Service Provider)

Housing

"We would have to go without something in order to get a new AC. If the government could develop a program to assist people who are elderly or living with disabilities to subsidize some portion of that (50% at least), that would be a lot of help for people."

(Barbara, Seniors Sharing Circle)

"From what we heard from tenants who contacted us during and after the heat dome, tenants' physical safety was put at risk, often to a lethal degree, by the heat dome, and others faced backlash or threats of loss of housing due to disputes over air conditioning & utilities costs (e.g., a tenant was served with an eviction notice for using their air conditioner during the heat dome)."

(Service Provider Workshop)

Access to cooling spaces

"The issue is you can't leave your things to go to a cooling centre! Who's going to watch your stuff? They don't allow carts."

"We have heard feedback from some municipalities that the cooling centre opened to support housed seniors and... was not meant to serve homeless individuals because 'municipal staff are not trained to deal with those people."

(Service Provider)

"For our clients, many of whom are unhoused, and experienced mental illness and substance use issues, the spaces listed above (community centres, libraries, playground water parks) are not accessible as they are stigmatized by staff and patrons of those places. Further, everyone was incredibly emotionally heightened during the heat, leading to far more conflict in those public spaces."

"There's limited green shady spots when you're homeless...it's hard to find a place where you can be without someone giving you a hard time."

(Urban Insecurely Housed Sharing Circle)

Connection

"Folks weren't feeling safe enough to reach out for help...based on historical harms coming from emergency services...especially for disabled populations, Indigenous people" and "lack of trust for government, organizations, emergency services, health authorities."

"There needs to be a pathway to get people out of harm's way before the ambulance. Once they reach the ambulance, that means they have not reached any of the other safety nets, or worse, nobody found them, and we find a fatality."

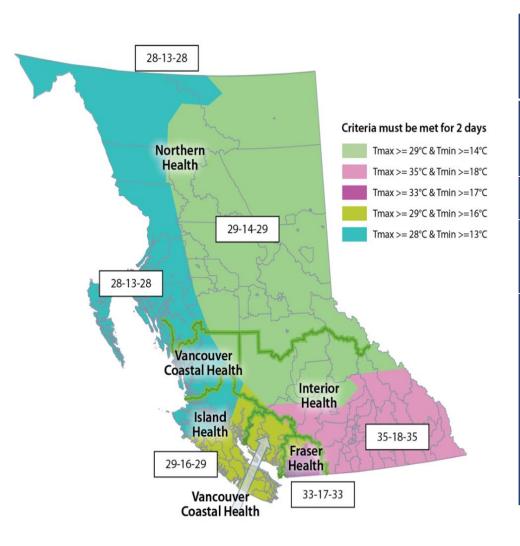
Heat Season 2022



- Studied and shared lessons from the heat dome, updated recommendations
- Coordinated guidance from public health, municipal governments and BC provincial partners
- Partnered on heat projects (e.g. cool kits, indoor temperature surveys)
 - Local government, social housing, NGOs
- Strengthened connections to and support for community organizations



BC Heat Alert Response System (BC HARS), 2022



| Alert level | Heat Warning | Extreme Heat Emergency |
|--------------------|---|---|
| Public health risk | Moderate (5% increase in mortality) | Very high (20% or more increase in mortality) |
| Descriptor | Very hot | Dangerously hot |
| Historic frequency | 1-3 per summer season | 1-2 per decade |
| Criteria | Southwest = 29-16-29* Fraser = 33-17-33* Southeast = 35-18-35* Northeast = 29-14-29* Northwest = 28-13-28* * °C (daytime high, nighttime high, daytime high) | Heat warning criteria have been met and forecast indicates that daily highs will increase day-over-day for 3 or more consecutive days |

BC Heat Alert Response System (BC HARS), 2022

Recommended Actions: NGOs and Partner Organizations The recommendations below are meant to support planning from a public health perspective as capacity and funding permits. Recommended Actions Recommended Actions Recommended Actions Recommended Actions Pre-season **Heat Warning** Extreme Heat Emergency Post-season Act in accordance with heat response Recommended Create or review and update your heat Act in accordance with heat response Consider undertaking local recovery response plan and other relevant heat plans for a heat warning event. plans for an extreme heat emergency activities, as required. Actions for NGOs and plans, including business continuity plans Conduct community outreach, focusing event. [This bullet is for use after the Consider and implement lessons Partner Organizations on identified susceptible and high-risk in consultation with key stakeholders and 2022 pilot year years] learned/observed. populations that your group or Participate in coordination call for partners. Actively engage with local community Create/check contingency planning for airorganization supports, to raise situational updates to answer questions members about how they are recovering conditioning and power supply in your awareness about the risks of heat. from the heat, and identify and respond Be mindful of cultural safety when If appropriate, engage in wellness checks to any new or emerging needs. Organize or participate in exercises and conducting community outreach forums to discuss and improve individual Inform loca Create/review heat response plans and Recommended of commu and collective responses to extreme heat. other plans containing heat-related or other plans containing heat-related cooling ce · Create or review and update your heat actions, including business continuity actions such as service continuity plans, Health Care outreach plans and communication culturally emergency management plans, and Providers most susce strategies geared towards any susceptible Create/check contingency planning for occupational health and safety plans. and high-risk populations that you population air-conditioning and power supply.

> Identify relevant information sources for your clients who may be at risk of extreme heat and prepare any additional messaging, as needed. Order and display heat health communication material in venues, and

Ensure that all relevant staff are

subscribed to receive relevant alerts.

(subscribe to the WeatherCan App)

- Share local through al communic sources.
- Where fea options for with local accessing (
- Share infor water four

- Participate in exercises and forums to discuss and improve individual and collective responses to extreme heat.
- Engage with key partners and community members to raise awareness about the risks of extreme heat.
- · Talk to your local authority about what local arrangements are in place to support people who are susceptible to extreme heat.
- Ensure that all relevant staff or team members are subscribed to receive heat

- Act in accordance with heat response plans
- Consider heat-related wellness checks for clients, patients, and staff.
- Monitor local weather conditions on the ECCC website or through the WeatherCAN
- Restock heat health communication resources in service locations. (HealthLinkBC Beat the Heat or HealthLinkBC Heat-related Illness and Prepared BC Emergency Guides)
- Ensure that staff engaging with the public are aware of local activities to support and protect those at risk.

- Ensure that clients, visitors, and staff have cool spaces and adequate drinking
- Reschedule any non-essential events, meetings, and services to another day or to the cooler part of the day.
- Where/when feasible, increase consistent community messaging through (social) media and standard communication channels.
- Where/when feasible, check in with families and caregivers of susceptible individuals about executing plans to protect those clients and family members from the impacts of extreme

And all recommended actions for a Heat Warning not already considered.

- Consider and implement lessons learned/observed.
- Where/when feasible, talk with families and caregivers about how their family members or clients are recovering from the impacts of extreme heat and any opportunity to improve support for future events.

bccdc.ca/health-professionals/professionalresources/heat-event-response-planning

Heat Check-Ins During Extreme Heat Events



Living Situation

More than half (56%) of decedents lived alone, 30% lived with spouse or family members; 8% lived in community or assisted living situations (i.e. group home, senior homes, long-term care homes); and 5% lived with unrelated friends or roommates (see Appendix 2, Table 8).

Recent Activity

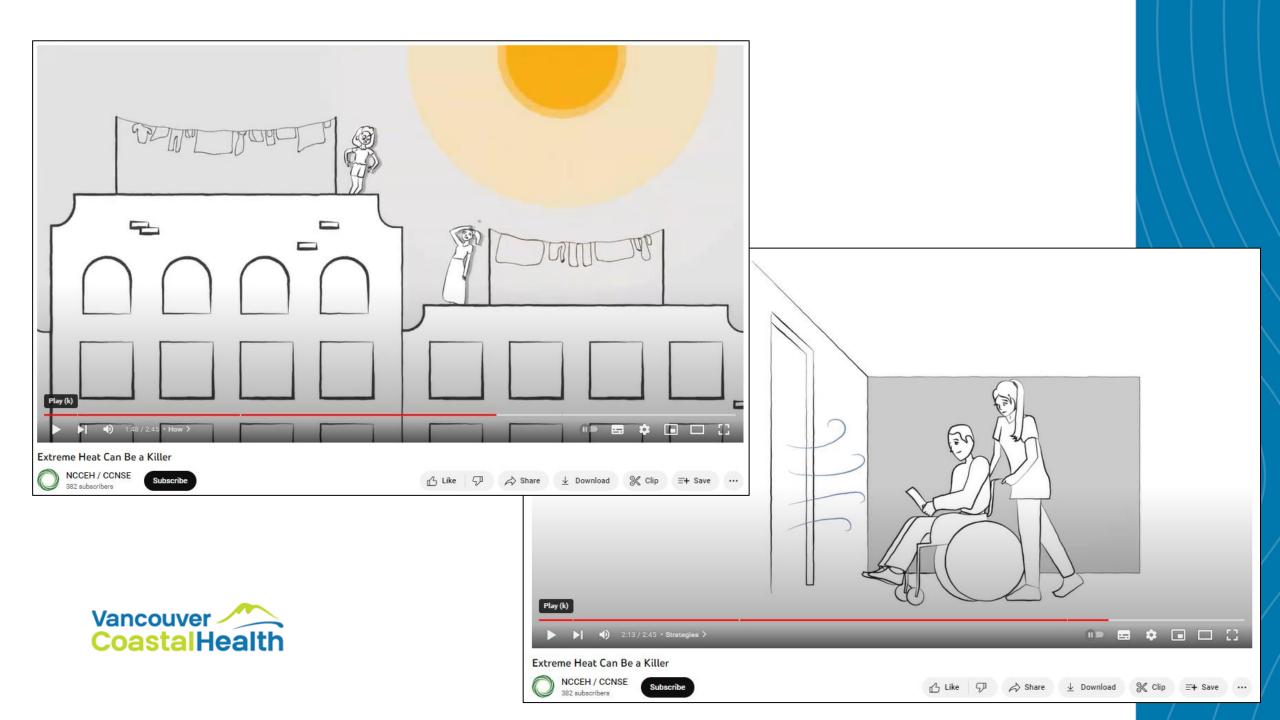
Very few deaths were linked to physical activity in the heat. BCCS investigative notes found that 20 (3.2%) decedents were known to be recently active prior to their death. Activities included gardening, outdoor home maintenance/repairs, walking outdoors, hiking, or playing a sport.

Reason Found

Place of injury, living situations and social connectedness influenced why and when the deceased was found (see Appendix 2, Table 9).

Half of those who died were found during a wellness check. Wellness checks were completed by family or friends, support workers or health workers who attended the deceased specifically out of concern for their well-being, or were conducted by police due to reported well-being concerns.

32% of those who died were found by someone during regular or routine contact such as a family member returning home or during a scheduled routine visit.



Consultation: What We Heard

- Met with local governments and NGOs to understand their interest in heat check-ins and what resources VCH could provide.
 - Heat check-ins happen in a variety of settings, many without health training.
 - Innovative and parallel work happening across community settings.
 - High motivation and limited capacity; need consistent funding.
 - Looking for guidance from health authorities, and inclusion in emergency coordination.







HEAT CHECK-IN SUPPORT FRAMEWORK

FOR NON-GOVERNMENTAL ORGANIZATIONS



HEAT RISKS

Dangerous **Temperatures**

As temperatures rise, so does the risk for severe health impacts. For heat-vulnerable people, risk for heat-related illness may increase at indoor temperatures over 26 °C (78 °F) and may significantly increase at indoor temperatures over 31 °C (88 °F). Without air conditioning or other mechanical cooling, different cooling measures such as adjusting window shades may only drop indoor temperature by a few degrees. If indoor temperatures are consistently high, heatvulnerable people are advised to move to a cooler location or, if that is not possible, receive heat check-ins more frequently.

Outdoor and indoor temperatures rise throughout the day, with outdoor temperatures typically peaking in the late afternoon and indoor temperatures in the evening (see figure below). Even if it is cooling down outside, the heat and the risk may still be high indoors.

Physical Environment Risks

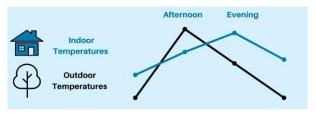
 Lack of mechanical cooling. such as air-conditioning or a

- · Higher floors of buildings
- · Building floors directly under
- · South and/or west facing windows
- · Large-sized windows
- · Single pane windows
- · No outside shade on windows
- No evening cross breeze
- · Lack of neighbourhood trees and other green features

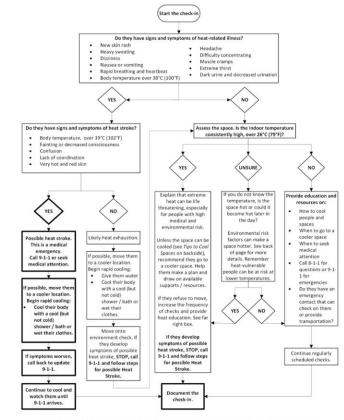
Heat-Vulnerable Groups

People respond differently to heat, and some people are at higher risk of experiencing health effects. Individuals with multiple risk factors are at higher risk and are more likely to require frequent check-ins. Support to stay cool may be especially important for the following groups of people:

- · Older adults, especially those aged 60 years or older
- People with schizophrenia, depression. anxiety disorders or dementia
- · People who live alone
- · People with pre-existing health conditions such as diabetes, heart disease or respiratory disease
- · People with substance use disorders, including alcohol
- · People with limited mobility
- · People experiencing homelessness or who are marginally housed
- · People who are pregnant
- · Infants and young children



Vancouver Coastal Health | Heat Check-In Framework for NGOs 2022 | Page 6



If you are unsure or have non-emergency medical questions, call 8-1-1 HealthLink BC. Available 24/7. For emergencies, call 9-1-1.

Heat Check-In Workflow For NGOs 2022 | Page 1/2 Vancouver CoastalHealth



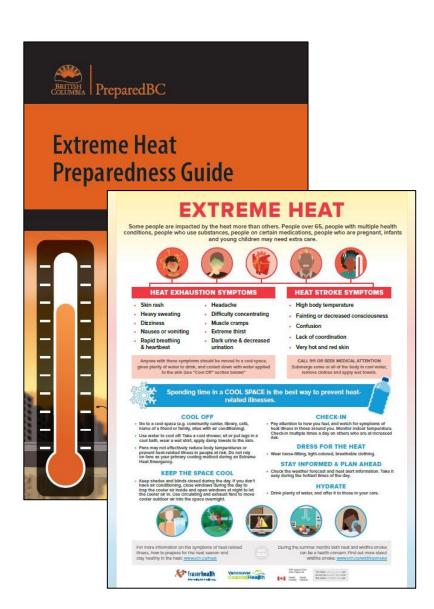


Heat Check-In Training Sessions

| Agenda | | | |
|----------------|---|--|--|
| Time | Format | Content | |
| 15 min | Introductions | | |
| 30 min | Presentation | Extreme heat risk factors, signs of heat-related illness, ways to cool people/ spaces, wildfire smoke, heat check-ins and available resources. | |
| 75 min | Practice scenarios in zoom break-out rooms. | Practice heat check-ins from start to finish with a partner. We will go through a variety of scenarios. | |
| Total: 2 hours | | | |



Other key resources on extreme heat



PreparedBC Guide: preparedbc.ca/extremeheat

 Advice for creating a heat plan, and actions for heat events. For example: Home preparation, awareness of neighbourhood cool spaces, identifying and checking on an 'extreme heat buddy'

Vancouver Coastal Health materials: vch.ca/heat

- Information on symptoms of heat exhaustion and heat stroke, risk factors, actions for community members
- Guidance for NGOs conducting community wellness checks
- Advice for operators of rental housing buildings and licensed care facilities

2023 Heat Season Planning and Beyond

- New climate resilience funding stream for community-based organizations (health promotion grants program)
- Improve organizational coordination and reduce gaps during heat events (e.g. potential online apps to track door-to-door and telephone checks)
- Support for programs to increase social connectedness – for climate resilience, and other benefits
- Advocate for the right to cool: enhance primary prevention of heat illness though safe housing as a determinant of health



"Right to Cool": Safe indoor temperature policy advocacy

- Policy mechanisms:
 - National (e.g. National Building Code)
 - Provincial (e.g. Residential Tenancy Act, BC Building Code)
 - Municipal (e.g. Vancouver Building By-law)
- Different tenancy and ownership types:
 - Market home ownership: individual, stratas
 - Market rentals: purpose-built rental, privately owned
 - Social housing, supported housing, shelter
- Building factors:
 - New vs existing builds
 - Number of units





Vancouver makes significant changes to building bylaws to address climate crisis

Among the changes are that all new multi-family buildings will require cooling systems by 2025 and air filtration to protect residents from intense heat waves and fire smoke pollution.

Tiffany Crawford

May 21, 2022 • May 24, 2022 • 5 minute read • D 64 Comments



Thank You

VCH Healthy Environments

michael.schwandt@vch.ca

vch.ca/climatechange vch.ca/heat









BC Housing's Extreme Heat Response







Curtis Brick

Curtis Brick dies from heat exposure in Grandview Park on July 29th, 2009



BC 2021 Heat Dome



Heat related illnesses & deaths

Photo by: Ben Nelms/CBC



Loss of wildlife, livestock & crops

Photo by: Ben Nelms/CBC



Loss of homes & communities

Lytton, July 1, 21. Photo by: Darryl Dyck, Canadian Press



Extreme Heat & Human Mortality: A Review of Heat-Related Deaths in BC in Summer 2021, Report to the Chief Coroner of BC, June 7, 2022

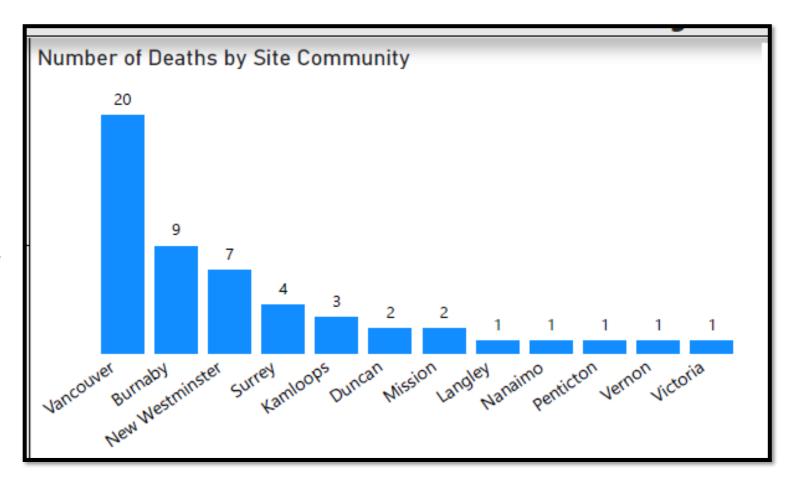
Table 7: Heat-Related Deaths by Place of Injury

| Place of Injury | Count | Percent |
|---------------------------------------|-------|---------|
| Private Residence - Multi-unit | 242 | 39.1% |
| Private Residence - Detached | 210 | 33.9% |
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| Total | 619 | |



Extreme Heat related deaths at social housing sites – based on data from BC Coroner

- 54 deaths at 46 sites
- 5 sites with multiple deaths
- 8 additional deaths at sites not funded by BC Housing (private SROs)
- 13 additional deaths occurred outside

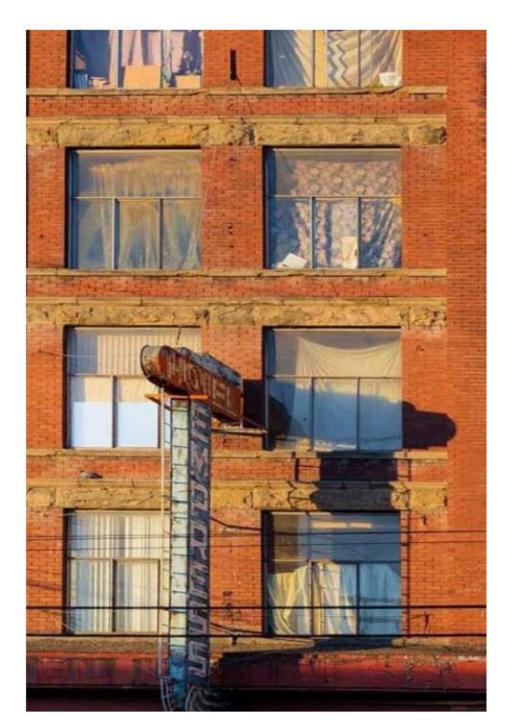




Housing Continuum







Risk factors:

- Urban Heat Island
- No proximity to green space
- Buildings with no cooling and no ventilation
- Solar heat gain through windows
- Cumulative effects of indoor temperatures

Protective Measures

- Heat wellness checks
- Distribution of fans
- Cooling spaces
- Outreach teams with water,
 sun hats & sun screen,
 cooling kits (started in 2022)





BC Housing's Extreme Heat & Wildfire Smoke Response



Emergency Response - Protecting tenants and clients



Making buildings more resilient



Components of BC Housing's Extreme Heat Emergency Response Plan

Education & awareness

Communication

Roles & responsibilities

Tenant risk assessment & wellness-checks plans

Create on-site cooling/clean air options

Communicate off-site cooling/clean air options

Equipment & supplies

Evaluation and update



Extreme Heat Response for the Unhoused Population

Outreach teams

Cooling kits

Pop-up cooling tents

Alerts & Communication





Tips to Beat the Heat Poster & Leaflets







Cool Kit



Thermometer



Gel Compress



Small Tote



Water Bottle



Towel



Spray Bottle



Non-Profit Response

- Volunteers
- Cooling tents
- Partnerships
- Outreach teams



June 21, 2022: Cooling Centre set up by Cedar Outreach Society in Abbotsford.

Photo credit: Monika Gul, CityNews.



Collaboration on awareness and education







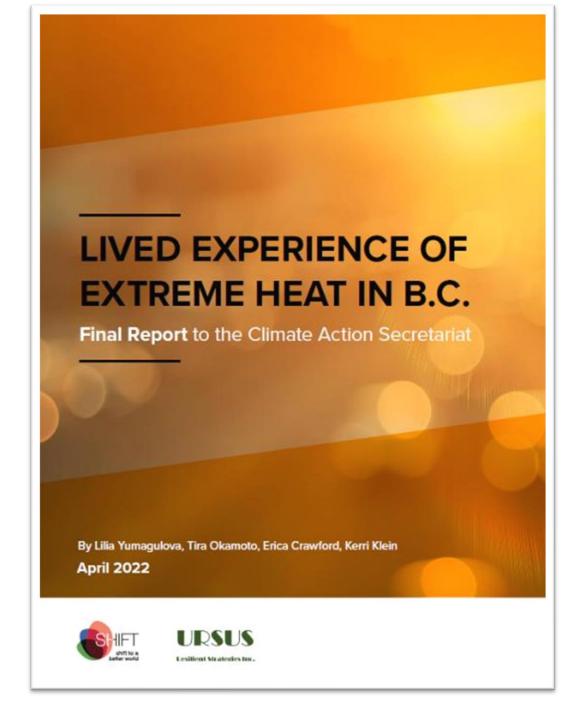
Working with:

- BCNPHA & HSABC
- Non-profit orgs
- City of Vancouver
- Medical Health Officers
- BCDC
- Health Canada
- Community orgs

Cross-sector workshops to better understand impact

Recorded webinars

Presentations at housing conferences



Engagement of people with lived experience of extreme heat events in B.C. in 2021

Feedback from service provider **organizations** supporting heat-vulnerable and **people** with lived experience (from equity denied groups):

- 1) People with disabilities
- 2) Socially isolated & economically marginalised **seniors** (rural and urban)
- 3) People who are **unhoused** / insecurely housed while often experiencing mental health or substance use challenges (rural and urban).

"Oftentimes when systems are not in place to offer supports, those on the front lines and in community carry the load. These are the same people carrying the load the rest of the year. Staffing capacity is stretched, resources are scarce, and people are tired."

"Folks weren't feeling safe enough to reach out for help...based on historical harms coming from emergency services...especially for disabled populations, Indigenous people" and "lack of trust for government, organizations, emergency services, health authorities."

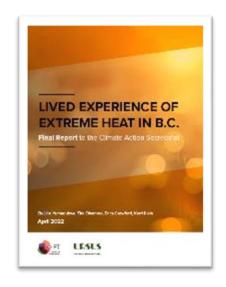


"There's limited green shady spots when you're homeless...it's hard to find a place where you can be without someone giving you a hard time."

(Urban Insecurely Housed Sharing Circle)

Key Messages

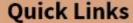
- 1 Focus needs to be on **cooling** infrastructure, not just cooling centres, to keep heat-vulnerable populations safe.
- 2 Heat response must be resilient to compounding effects, such as pandemic restrictions, holiday closures, & wildfire smoke.
- There is an opportunity to apply existing response plans (e.g., extreme cold, COVID-19) to heat and initiate community-level response and supports.



- 4 Urban and rural communities have differing needs and priorities for addressing social inequities exacerbated by heat.
- People living in B.C. can **no longer escape**the frequency and intensity of climate
 change and we must adapt and be flexible
 to our new normal.

Extreme Heat and Wildfire Smoke





BC CDC Guidance for Cooling Centres in the Context of Covid-19

Public Weather Alerts for BC

HealthLinkBC - Beat the Heat 2

BC CDC Wildfire Smoke

BC CDC Wildfires and Covid-19

Useful Documents

<u>Tips to Beat the Heat During Covid 19</u>
Poster

Using Chill Rooms During Covid-19 Poster



Health Impacts

Everyone is at risk of heat and wildfire smoke

Planning and Communicating with Tenants

Building managers and housing providers should

How to Cool a Space

There are different actions building operators, staff

https://www.bchousing.org/projects-partners/extreme-heat



Questions?

For more information, please contact: Magdalena Szpala, mszpala@bchousing.org

www.bchousing.org/projects-partners/extreme-heat

Subscribe to Partner Bulletin: www.bchousing.org/subscribe