

Extreme Heat, Heating and Cooling Systems in Institutions

This is a plain language document of a research paper. The research paper is called **Extreme Heat, HVAC & People Labelled with Intellectual or Developmental Disabilities.**

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SUMMARY

This paper is about extreme heat events and the effects on people with intellectual or developmental disabilities who live in institutional settings.

There are more days with extremely hot temperatures. This number has doubled in the past 40 years. This will increase even more in the coming years. This will happen even with efforts to reduce climate change. People labelled with intellectual or developmental disabilities will be affected by extreme heat. They are more likely to have other conditions that increase their risk of being harmed or dying from extreme heat. Institutional settings do not have good enough systems for heating and cooling to reduce these risks.

THE ISSUE

People with intellectual or developmental disabilities are at increased risk for bad health outcomes due to extreme heat. There are two risk factors for this group. The first is that they are more likely to live in institutional settings. The second is that they are more likely to be taking medications that affect their body's ability to stay at the temperature it needs to. Based on the rise in extreme weather events, institutions need to update their systems. This will help to avoid harm to labelled people who live there.

BACKGROUND – EXTREME HEAT AND PEOPLE LIVING IN INSTITUTIONS

Extreme heat waves and other major climate events are going to increase in the coming years. The International Panel on Climate Change made an alert because of these climate changes. The Code Red for Humanity' alert was issued in August 2021. Worldwide changes will not lower this risk. There will still be increases in daily temperatures in the coming years.

In Canada, the number of days with extreme temperatures is set to increase by a lot. In the summer of 2021 there were record breaking heat waves. There were a lot of people who died because of the extreme heat. In British Columbia alone, more than 600 people died during a six-day heat wave.

People with intellectual or developmental disabilities are at high risk for bad outcomes from extreme weather. This includes losing power, getting heat stroke or being at risk for a fire. These risks are increased for people who live in institutional settings. They often have no access to air conditioning. There are also many people in a small space. In addition, many people take medications that effect their reaction to extreme heat. These are risk factors for bad outcomes.

KEY POINTS TO CONSIDER

Most of the deaths from heat waves have happened indoors. Deaths occurred in homes or institutional settings without air conditioning. Labelled people have worse health outcomes and higher rates of death when they live in institutional settings. These rates are lower when people live independently with the supports they need. Changes need to be made for both private and public housing. But provinces can put in rules and guidelines for institutional settings now. These will increase the health and safety outcomes during extreme weather. [Table 1](#) shows the only guidelines available on temperatures in institutions in the provinces.

Another risk factor is that certain medications make the situation worse for people. These medications change how a person's body reacts to heat and cold. These medications make it hard for the person's body to stay at the temperature it needs to. The medications can also make it hard for people to stay hydrated or have enough water in their body. People with intellectual or developmental disabilities are often prescribed these drugs. Research shows that around 25 to 42% take medications like these. When people are living in institutional settings, they are even more likely to be taking these drugs.

Here is an example of how these drugs can affect people in heat waves. In 2018 there was a heat wave in Quebec. Of the people who died from the heat, 25% were taking these kinds of medications. But they only accounted for 1% of the population. They were taking these medications for a mental health illness called 'schizophrenia.'

As global temperatures increase it will be critical to have proper heating and air conditioning. This will reduce harm to people. Systems that bring fresh air into buildings are also important. This will help reduce the risk of Covid outbreaks. Rules and guidelines about heating, cooling and air circulation can have a positive health impact on people living in institutional settings.

RECOMMENDATIONS FOR CHANGE

People with intellectual or developmental disabilities are at risk for dying or having bad health outcomes during heat waves. This risk can be lowered. New rules and guidelines can be made for institutions that are funded by provinces. There is a need for central air systems in both common areas and private rooms. These systems cost a lot of money to install and keep up. Governments should provide some funding to their institutions to improve air systems.

More can be done to improve health outcomes in residential settings. Indoor temperature rules can be changed. Research shows that the temperature inside a building can affect people's health. Buildings with temperatures between 18 and 24 degrees Celsius have the least impact on people's health outcome. Buildings should have rules on the maximum indoor temperature. This is especially important for institutional buildings. [Table 1](#) below shows the only guidelines available on temperatures in institutions in the provinces.

The changes that need to be made in institutions show that they can be unsafe during extreme weather. There needs to be a strong housing strategy for labelled people. Relying on institutional settings puts people at higher risk. They have a higher chance of being harmed by extreme heat events when living in these spaces. New federal housing supports must address this issue. There are more than 100,000 labeled people with severe housing needs across the country.

Table 1 shows the province and the regulation (or rule) on temperature in institutional settings.

Province	Regulation	Temperature Regulations
Ontario	Quality Assurance Measures	One common area cooling room with temperature below 36 degrees Celsius.
Alberta	Supportive Living Accommodation Standards	In common areas the Facility is maintained within a temperature range of 22 to 28 degrees Celsius.
Manitoba	Residential Care Licensing Manual	N/A
British Columbia	Community Care and Assisted Living Act, Residential Care Regulation	A licensee must ensure that the temperature in each bedroom, bathroom and common room is safe and comfortable for a person who is carrying out the types of activities that would be reasonably expected in the ordinary use of the room.
Saskatchewan	The Adult and Youth Group Homes Regulations	Each bedroom is to have at least one mirror, at least one outside window that may be opened for fresh air and adequate ventilation, lighting and heating.
Nova Scotia	Homes for Special Care Regulations	All rooms in a home for special care which are used by aged persons or person receiving nursing care, shall be maintained at a temperature of not less than 22 degrees Celsius during the day and not less than 20 degrees Celsius during the night.
Prince Edward Island	Community Care Facilities And Nursing Homes Act	A facility shall be kept weatherproof, dry, free of pests, adequately heated, ventilated and lighted, in a state of good repair and sanitation, and in general safe, clean and reasonably comfortable for residents.