



LEDUC

Preparing for extreme heat before mass gatherings

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Source: City of Leduc

THE SCIENCE

Every year, cities across Canada host numerous events where large numbers of people are gathered in one place. These events can take many forms, from music festivals to sporting events. Regardless of the type of event, mass gatherings have the potential to overwhelm local health care systems and research shows that heat- and cold-related health conditions provide the highest number of patient presentations to hospitals during and following mass gathering events.

When mass-gathering events take place in the summer time, they necessitate careful planning by the event organizers to reduce heat-health risks among attendees. Indeed, conditions such as dehydration and heat stroke can quickly develop during extremely hot days. Event planners can implement a variety of preventative actions such as the provision of on-site medical care, the promotion of information to avoid heat-related illnesses, the availability of cooling stations and adequate access to water stations.

THE TRIGGER

The City of Leduc was selected to host the Alberta Summer Games in July 2016. This would see the city play host to approximately 10,000 people over four days of competition. While extreme heat events are considered to only be a moderate risk in Leduc because of a typically moderate climate, the city still included specific planning actions to mitigate potential heat-health risk when preparing for the Games. These actions were integrated into a broader emergency preparedness strategy that planned for other weather extremes such as thunderstorm and tornado risk. Planning to mitigate heat-health risk for the Alberta Summer Games was also aligned with Leduc's Weather and Climate Readiness Plan, which highlights the importance of being prepared for the risks associated with extreme weather events.

THE APPROACH

Specific actions were taken by the planners of the Alberta Summer Games in Leduc to ensure that both athletes and their supporters would be protected from a broad range of extreme weather events, including heat waves. More specifically, volunteers at the Games were trained to recognize symptoms of several health issues, including heat-related conditions such as dehydration and heat stroke. When noticing these symptoms, volunteers were trained to call on-site health care professionals through an emergency line and direct them to the individuals requiring medical attention.

Planning efforts before the Games also focused on hydration. Water stations were located across the site to make sure all attendees could easily access it when needed. These water stations allowed attendees to refill existing water bottles or get new reusable ones. One of the objectives pursued by the planning committee of the Games was to host a disposable water bottle-free event. As such, the organizing committee asked vendors not to sell water but instead to give out free reusable bottles. With careful planning, Leduc was able to meet this sustainability goal without sacrificing the health and wellness of the athletes and other attendees.



Figure 5: Water stations were located across the site of the Alberta Summer Games to make sure all attendees could easily access water when needed. (Source: City of Leduc)

Golf carts were also used to transport five-gallon bottles of water to ensure all stations had enough water at all times. These golf carts were also used to support medical staff in emergencies by delivering ice and various supplies and to move low-risk patients to a medical area at the Recreation Centre. During sporting events like the Alberta Summer Games, athletes are particularly at risk of suffering from dehydration on hot days. In order to minimize this risk, a few water stations were planned and installed specifically for athletes to ensure they could easily access water at all times. Information on the importance of hydration was also disseminated to athletes prior to the event through the Games handbook.

Finally, people attending the Games always had easy access to the recreation centre building to cool off during the event. This is particularly important as spending a few hours per day in air conditioned spaces during extremely hot days can significantly reduce the risk of heat-related health conditions and heat stress. Cooling shelters allow the body to cool off when it is unable to do so outdoors.

THE OUTCOME

Although Leduc is not at high risk of being affected by extreme heat events, the city still included specific actions that would reduce the likelihood of any attendees suffering from heat-related health conditions when planning the Games. The temperature did not exceed 25°C during the Games, which minimized the risk of heat-related health conditions affecting attendees. Even though outdoor temperatures did not get extremely high, the emergency preparedness plan had to be activated

twice during the Games to protect people from severe thunderstorms. The recreation centre, which was also the planned cooling station for the Games, was then used as a temporary shelter to protect attendees from the storm.

A WORD FROM LEDUC

Even though Leduc only faces a moderate risk of being affected by extreme heat events, the city still included extreme heat planning within its broader emergency preparedness strategy for the 2016 Alberta Summer Games. When asked what advice she would give to other municipalities that would like to mitigate heat-health risks when planning mass gathering events, Pamela Goertzen, Environmental Sustainability Assistant for the City of Leduc, noted that there are numerous benefits to having the venues in relatively close proximity to each other, particularly when they are close to a large indoor air-conditioned facility that can shelter all attendees in the event of an emergency. "Having sufficient hydration is also very important and can be done without creating the mountain of waste that comes with bottled water," said Ms. Goertzen. After the Alberta Summer Games, Leduc was left with two of the water units used for the Games. One of the units will be used for future events and the other will be used during future emergencies where people may not have access to water in their homes.