



OXFORD COUNTY

Adapting to extreme heat –
perspectives from rural Southwestern
Ontario

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Source: Adobe Stock Photo

THE SCIENCE

During an extreme heat event, effective communication between local agencies as well as with the public is essential. Rural and smaller urban communities are home to many heat-vulnerable individuals, including a rapidly growing older population and certain occupational groups (e.g. farmers, foresters, fishers, and other labourers doing outdoor work). Rural regions can also face unique challenges in developing and implementing heat-health preventative actions due to limited resources and expertise, proximity and access to health services, a smaller number of community support organizations and facilities, limited media for communicating in real time with local populations during an event and, finally, a greater likelihood of people being isolated or without public transportation compared with those living in urban settings.

At the same time, rural communities have particular characteristics that can support the adoption of community-based strategies to minimize heat-health risks and enhance response efforts. Identifying and understanding the vulnerabilities that may threaten a specific community and the resources that can be leveraged during an emergency are key steps in building resiliency.

Oxford County (population 106,000) is a primarily rural area located in Southwestern Ontario that consists of one city, two towns and five townships. Historically, Southwestern Ontario has experienced some of the highest recorded temperatures and humidex values in the country. Due to climate change, this region is expected to experience a doubling of days over 30°C by mid-century.

THE TRIGGER

An emergency heat event requires the participation of many parts of society during the alert, response and recovery phases. A comprehensive risk management approach to extreme heat necessitates effective partnerships among different levels of government, first responders, the private sector, volunteers, and community-based NGOs. In Ontario, a large number of communities have developed different thresholds for calling alerts, communication protocols and response mechanisms over time.

By 2012, Oxford County Public Health and Emergency Services had committed to understanding and effectively managing the health risks and impacts from extreme heat. The County actively engaged neighbouring public health units and participated in multi-stakeholder workshops to collect information on key issues such as effective heat-health risk communication, interactions between medications and heat and methods for assessing community-level vulnerabilities. This information supported the development of a county-wide Heat Alert and Response System.

THE APPROACH

The County used an extreme heat tabletop exercise to identify the best way to coordinate a community response to an extreme heat event among the County's departments, area municipalities, local organizations, and healthcare facilities.

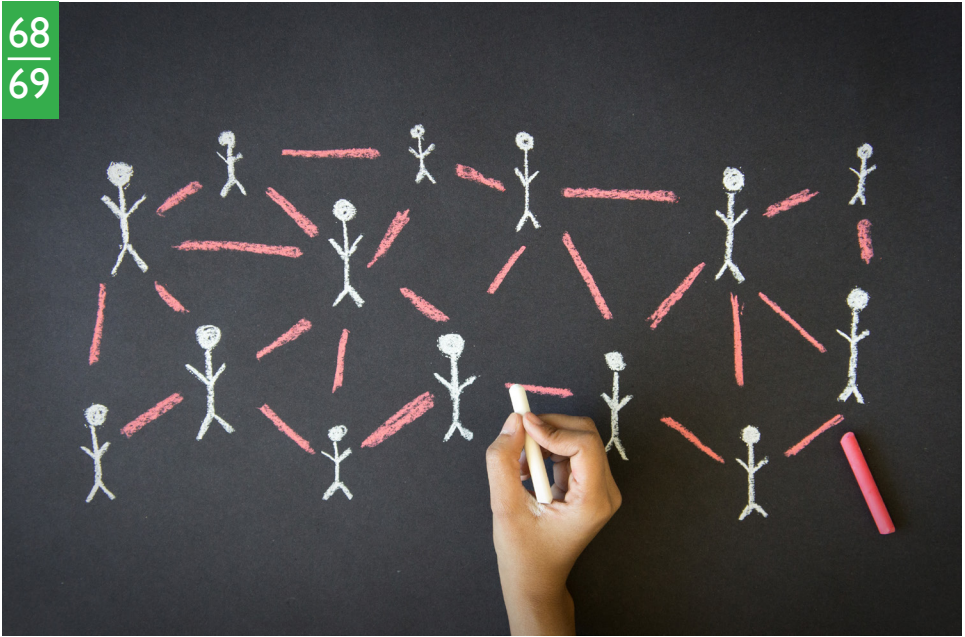


Figure 17: The exercise conducted in Oxford County revealed that communication between affected agencies, the general public and the emergency operations centre is essential. (Source: Adobe Stock Photo)

Recognizing the opportunity to engage a broad range of community partners about heat and health, Oxford County held the tabletop exercise in conjunction with the County's annual emergency preparedness, response education, and training event. The all-day event began with a series of background presentations on the impacts of heat on vulnerable populations, regional climatology, interactions between heat and medications, and local services for a response. Participants then worked through a series of worsening heat scenarios within a controlled situational environment to test a planned heat alert activation and response before shifting to community recovery. Participants were asked to consider roles and responsibilities within their organization, existing procedures, as well as possible actions and decision-making. The scenarios developed emphasized exploration of community response capacity related to different possible situations, such as well-water contamination, power outages, community isolation and disposal of dead live stock.

THE OUTCOME

The exercise was a useful tool to raise awareness of this growing public health issue, identify gaps in existing risk management processes, and provide an opportunity to improve local response capabilities. Using the exercise as an education and training session was a highly successful approach to engaging partners and stakeholders. Close to 100 participants attended the tabletop exercise and it was one of the largest exercises of that nature facilitated by the County.

The County was able to gain valuable insights about vulnerabilities in their community and the measures needed to address them. Four key themes emerged from the exercise:

- Communication between affected agencies, the general public and the emergency operations centre is essential. The exercise provided the first opportunity for these units to come together to discuss response communication (e.g. who is responsible for issuing a heat alert, who declares an emergency and informs the public in a timely manner?).
- Many agencies that participated in the exercise identified the importance of reviewing their current policies (if they exist) on extreme heat.
- Informing the public is a delicate balance between being proactive and desensitizing the population, especially those most vulnerable to heat.
- There are resource challenges for rural emergency management operations. Resource demands were frequently mentioned by participants throughout the exercise.

Examining the coordination of efforts to respond to extreme heat in a participatory fashion permitted Oxford County to work towards developing a robust Heat Alert and Response System for the region.

A WORD FROM OXFORD COUNTY

When asked what advice he would provide to a rural community looking to develop a Heat Alert and Response System, Peter Heywood, Manager, Health Protection for Oxford County Public Health and Emergency Services suggested that “during a heat emergency, the response to vulnerable populations in rural communities, including older adults, requires special consideration and care.” In Oxford County, the 55+ population is proportionally larger and increasing at a slightly faster rate than the Ontario average. Looking forward, this has implications for Oxford County with respect to the accessibility of this population to services, including public transportation and cooling centres. It also impacts how heat-related information is disseminated to people residing in rural areas. Mr. Heywood recommended that “local public health units partner with area municipalities and community agencies to conduct a vulnerability assessment.” The assessment can support and guide heat-related response activities in rural settings. Oxford County is in the initial stages of an assessment and is hopeful that it will allow municipalities and community agencies to improve their preparedness, response and recovery activities related to extreme heat events, with a particular emphasis on older adults.