

**Appendix I:
Olmsted County
Public Health Services
case study**

Case Study: Olmsted County Public Health

Olmsted County Public Health Services (OCPHS) is one of only two local public health departments in Minnesota to have an extreme heat annex in their All Hazards Plan. With temperatures and dew points rising across the state, the lessons learned from one community could be critical for protecting the health of Minnesotans statewide.

OCPHS initiated formal planning for extreme heat events in 2005 when they augmented their All Hazards Plan by creating a Cooling Center Plan. This was preceded by informal response plans that were put in place years before due to a heat-related death. The plan established a Cooling Center Task Force with membership from Olmsted County Emergency Management, OCPHS, the Southeast Minnesota American Red Cross Chapter (Red Cross), Olmsted County Community Services, and the Salvation Army. The taskforce met once a year to review and revise the plan.

The Cooling Center Plan consisted of working with partners to inform local media outlets of the upcoming heat event, to promote public health messages about staying cool and hydrated, and to open a cooling center where residents could go to seek relief from the heat. OCPHS worked closely with the Red Cross in Rochester to coordinate efforts and to use the Red Cross as the cooling center. The Red Cross provided water and snacks and monitored anyone who used the cooling center.

For most heat-related events, the Cooling Center Plan was activated when the local National Weather Service (NWS) station for Olmsted County (i.e., the La Crosse, WI station) issued an excessive heat warning or advisory. In order to determine activation of the plan, Olmsted County Emergency Management (OCEM) would review weather reports and would call NWS to determine if an excessive heat warning or advisory was predicted. Then, OCEM would call OCPHS to determine if the plan should be activated. Because of the time delay between the weather predictions and the transpiration of actual heat events OCEM and OCPHS had to use their best judgment about the likelihood of NWS issuing an official warning or advisory. A few times when the meteorological conditions were borderline for an excessive heat warning or advisory, OCEM and OCPHS would activate the plan without an official warning or advisory from NWS. OCEM and OCPHS based their decision on whether the temperatures were staying around 90° F, how long the heat wave was predicted to last, and whether it was predicted to cool off at night. Sometimes, OCPHS would provide information about what people should do to prepare for the heat upon the request of the media, without formal activation of a cooling center.

The Cooling Center Plan was activated in 2009, 2010 and 2011. Before 2010, documentation of events was limited, and there was no check in with the local hospitals to see if there was an increase in patient load in the Rochester area.

On August 8-13, 2010, Rochester experienced an extreme heat event in which OCPHS activated the Cooling Center Plan. The Red Cross opened the cooling center and extended its normal hours of operation. During this time, only two people used the Red Cross cooling center, a mother and a child. The Red Cross found that the child was dehydrated, but not severely enough to request further assistance. After this event, and the experience from previous years, the task force met to discuss more effective strategies for preventing illnesses from extreme heat because people were not using the cooling center. In early 2011, OCPHS researched extreme heat strategies and transitioned to an Excessive Heat Annex vs. a "Cooling Center" plan.

The Excessive Heat Annex was implemented on June 7, 2011 after several days of unseasonably high heat and humidity. This activation provided tips on how to stay cool, and rather than directing people to go to a cooling center, public health messages directed people to go to places where they would normally go to cool off, such as shopping centers, libraries, senior centers, etc.

In addition, OCPHS worked with Olmsted County Community Services to outreach to at-risk populations, especially the elderly population. OCPHS and the Red Cross were particularly concerned about at-risk populations, such as the elderly who were more dependent on fans and unlikely to leave their homes. The main service used was Meals on Wheels. Persons would deliver a meal to the elderly resident and would ask how they were doing and if they needed any help. This method worked well to reach homebound residents; however, the timing of activation was made after many of the Meals on Wheels volunteers had already started their daily deliveries. This impacted the volunteers' ability to provide timely messages to all of their customers.

The June 7 event was the first time OCPHS staff called emergency managers at the Mayo Clinic and the Olmsted Medical Center to see if they had seen an increase in patient load. Because heat-related illness isn't coded as a primary complaint, the emergency departments were unable to reliably track any excess visits due to the heat. No increase in visits overall were reported, but because of the coding issue, it was unknown if any of the patients they did see were due to excessive heat.

Minor changes were made to the Excessive Heat Annex after the June 7, 2011 event. OCEM, OCPHS and other task force members felt that they needed to communicate better and meet in-person rather than having a phone call.

On July 16-20, 2011, Olmsted County experienced another period of extreme heat. The Excessive Heat Annex was activated on Monday, July 18, and OCEM, OCPHS, the Red Cross and other partners met in-person to implement the plan. The media produced two special segments, one on kids and heat and one on the elderly and heat. Press releases contained specific risk factor information and asked people to seek relief at nearby public air-conditioned places.

The city bus line offered free rides to air-conditioned places. A rider would simply have to state that they wanted to go to a cool place, and their trip would be free. Also, OCPHS recommended Mobile Home Parks that had air-conditioned storm shelters to open them for their residents. Many mobile home parks had already offered that service, but this was the first time OCPHS recommended the parks to do so.

Interestingly, partner organizations received calls during the July event from concerned citizens wondering why a cooling center hadn't been opened. The public health messages mentioned cool places people could go, but did not specifically say that a cooling center would be opened. OCPHS responded by writing a press release to inform the public that if they didn't want to go to an air-conditioned place near their homes, they could go to the Red Cross building.

This time, 13 people came to the Red Cross building over 1.5 days. Some of the people did not speak English as a first language and had a difficult time understanding exactly what was happening. It became apparent that information and materials needed to be prepared in other languages besides English.

OCPHS worked with the City of Rochester to extend hours and allow free access to park swimming areas and public pools. This was tremendously popular, but several pools were understaffed, and at some places, people had to wait in long lines. Some of the pools reached capacity before everyone was able to use them. This caused some consternation among the people who waited to use the pools. Providing free access to the swimming areas was intended to help those who most needed a place to cool off, but regular pool users and others who didn't need the service also used it causing an overcrowding problem.

OCPHS received a couple of phone calls from pet owners who wanted to go to a cool place, but didn't want to leave their pets at home because they were afraid their pets might die. Animal shelters and the humane society would not take the pets. Veterinarians would accept pets, but the animals would have to be boarded and paid for, which was prohibitive for some of the owners. OCPHS talked to several veterinarians about how owners could keep their pets cool. The veterinarians recommended keeping the pets fanned and well hydrated. A suitable, affordable option that could serve many people who would like to bring their pets some place cool was not identified.

Some members of the task force felt that the plan hadn't been implemented early enough. The plan hadn't been implemented until July 18 because July 16 and 17 did not meet the criteria for a NWS heat advisory. However, the timing of activation is a challenge. Because the risk for health concerns (especially with the elderly and other "shut-in" populations) increases with extended periods of extreme heat, and since most extreme heat events experienced to-date in Olmsted County have been relatively short in duration, Olmsted County felt it was important to not prematurely activate the plan to avoid reluctance in the community to appropriately respond during longer duration events (i.e., avoid the "cry-wolf" effect). This challenge reinforces the importance of developing local strategies tailored to reach the local at-risk populations.

OCPHS and the task force partners felt overall that it was critical to have an Excessive Heat Annex. In the future, they would provide additional coordination of messages between county and city organizations (e.g. OCPHS and City of Rochester); continue to identify additional strategies, including outreach to at-risk populations; and enhance the ability to conduct active surveillance among the healthcare organizations to ensure that the annex was implemented more effectively.