

The Averted Tragedy

Tim Bradley, Captain
Aurora Fire Department
Aurora, IL

The call: Heat exhaustion

At 1242 hours on a very hot, humid summer afternoon in June 2006, the Aurora Fire Department responded to a report of a male with heat exhaustion. The call originated from a large factory where this person had been working for the past four hours. Engine 9 and Medic 4 arrived on scene and were taken by security to the patient who was on a second floor landing at one end of the factory. He appeared confused and agitated. We placed the patient on O₂ with a non-rebreather mask. ALS care was initiated and the patient was removed to the ambulance. At this point, everyone thought it was a normal case of heat exhaustion.

Masimo Rad-57 identifies CO poisoning

Once in the ambulance, the paramedic used the Masimo Rad-57 to check the patient's SpO₂ when he noticed a carbon monoxide reading of 9%. Once the medic advised me of the patient's CO level, I sent my crew into the building with a handheld gas meter. Immediately we found CO levels between 40 and 55 ppm. The levels continued to increase as we walked farther into the structure, eventually getting as high as 556 ppm.

Immediate evacuation of 100+ employees

A truck company and battalion chief were requested to the scene as we immediately began evacuating over 100 employees from the structure. Some of the people being evacuated began

complaining of headaches and fatigue, including some pregnant females. These people were taken to an ambulance where their vitals and CO levels were evaluated.

CO source identified

The CO originated from propane- and gasoline-operated power lifts used to install rack storage. The lifts were removed from the building and the CO levels slowly dropped to 0 ppm. About three hours later, the employees were allowed to re-enter the building.

Masimo Rad-57 prevents a serious situation

The original patient was transported to a local hospital where he was treated and released. The Masimo Rad-57 made a huge difference, preventing a serious situation from spiraling out of control. It also saved the local hospitals from an avalanche of patients. Fortunately we were able to handle it all on scene, without overwhelming our system's resources. This incident was mitigated with only one minor injury, but I am left to wonder what would have happened if we did not have the Masimo Rad-57 that day.



City of Aurora Fire Department, Aurora, IL

The City of Aurora Fire Department is responsible for a 39 square-mile area about 40 miles west of Chicago. They serve a population of 157,267 with three battalion chiefs, 203 career firefighters, nine pumpers, three aerial/platform units, and six medic units.