

CASE STUDY

EMS > Case #207

CO Gas from Forklift Sickens Building Occupants

Masimo's Rad-57™ Convinces Reluctant Patients to Seek Treatment for CO Poisoning

Location Tempe Fire Department

Clinician Reporting Mitch Bycura, Deputy Chief of Medical Services, Tempe Fire Department

Patient Event Asymptomatic patients convinced to seek help after Rad-57 noninvasive measurements

> The Situation

A fire crew responded to a 911 call from a man experiencing chest pains. The crew arrived to find the man standing outside of his place of business. When interviewed about his symptoms, he mentioned that he had been feeling ill for awhile, but especially "since the odor in the building had become worse." The mention of an odor alerted the crew to the possibility of a dangerous gas. By coincidence, the fire engine that responded was part of the Hazardous Materials Response Team (HMRT). While the man complaining of chest pains was immediately transported to the hospital, one of the crew members went inside the building to check the air for combustible gases, including (among other gases) carbon monoxide (CO). Using an air gas meter, the crew member measured the CO gas level in the air, which registered extremely high at over 280 (OSHA considers 35 or below safe).



> The Problem

Once inside, the fire crew traced the highest CO levels to the source of the problem: propane-filled forklifts had been used to move machinery inside the building for the past few days. All employees working in the area with the highest concentration of CO in the air were measured using the Masimo® Rad-57. Although most of the seven tested exhibited no symptoms, all had extremely high SpCO® measurements between 20 and 33—posing serious health risks and potentially fatal consequences. The gradual rise in their carboxyhemoglobin levels had allowed their bodies to become more tolerant and, despite having severe CO poisoning, they remained asymptomatic. Everyone tested was transported to the hospital for medical evaluation and treatment and the building was evacuated.

> The Masimo Difference

Since most of the people at the scene did not have symptoms corresponding to the severity of their CO poisoning, they were reluctant to go to the hospital and initially refused any treatment. But the Masimo Rad-57 SpCO measurements and the urging of the paramedics on the scene convinced them of the serious danger they were in if left untreated. The alarmingly high concentration of CO in their bloodstream could have caused heart attacks or fatal arrhythmias in susceptible individuals had they not received proper, prompt care. All seven were administered oxygen during transport to the hospital and recovered fully.

"The Masimo Rad-57 helped us convince seven people they needed immediate medical attention for CO poisoning when they would not have been willing to accept treatment otherwise." — Mitch Bycura