Race Against Time Prevents CO-Related Tragedy

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The call: Allergic reaction

In February 2006, firefighter/paramedics with the Hebron, Kentucky Fire Protection District were called to a local hotel in response to a young girl experiencing a potential allergic reaction to chlorine. The girl had been in the hotel's indoor pool for about an hour when she started feeling sick. Upon arrival, firefighter/paramedic Brandon Johnson tried to assess the situation, "I think the kids were a little nervous to talk to our crew, so we didn't get too good of a read from them." The crew quickly requested an engine company to perform CO screening on victims. While waiting for the engine to arrive, the crew's air monitors began detecting high levels of CO-at least 900 ppm in the indoor pool area and more than 1,200 ppm in the adjacent boiler room.

Masimo Rad-57 arrives, patients gone

When the engine company arrived with the Masimo Rad-57, the families had already left the hotel--despite the crew's warnings. "Luckily they gave us some cell phone numbers and contact information," said Johnson. The crew began testing hotel staff and detected 16% SpCO in a maintenance worker who'd been working in the boiler room for about 20 minutes. Johnson and his crew became extremely concerned at that point, knowing the children had been in the pool for about an hour. The crew quickly called dispatch and requested that an ambulance respond to the hotel where the families had returned.

Kids sick with 22% CO, mothers 18% CO

En route to the hotel, Johnson's crew contacted one of the mothers via cell phone and explained the danger they were in. By the time the families returned to their hotel, all four children had vomited. When Johnson and his crew arrived, they immediately tested the families with the Rad-57 and detected COHb levels of 20% to 22% in all four kids and 17% to 18% percent in the mothers. All were immediately taken to hospitals and recovered without incident.

Rad-57 quickly quantified seriousness of the problem

Johnson gives much of the credit for the patients' fortunate outcome to the Rad-57, adding that other than taking the patients to an ED or actually witnessing symptoms, there wouldn't have been any way to quantify the seriousness of the problem. "It couldn't have been done without that instrument," Johnson said of the Rad-57. "It's been really beneficial for us, especially in responding to incidents when air monitors can't find the source." Johnson's experience underscores the complexity of CO-related incidents and the need for vigilance by first responders in dealing with them.

Hebron, Kentucky Fire Protection District

Hebron Fire Protection District is located in the northern part of Boone County, KY, and covers approximately 42 square miles. The fire district has 2 stations, 32 full-time personnel with 13 of those being paramedics. There are also about 20 volunteers that serve the district. The district maintains 3 engines, 1 tower ladder, 1 rescue, 2 ambulances, 2 utility trucks, 3 staff vehicles, and 1 regional hazmat unit that responds throughout Northern Kentucky stations.