



Fire Risk in Areas Where Supplemental Oxygen Is in Use

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ECRI continues to investigate fires associated with the delivery of supplemental oxygen in a range of patient care areas, including the home.

The three elements needed for a fire—an oxidizer (any gas that can support combustion), a fuel (any object that can burn), and an ignition source—can be present wherever oxygen is delivered. Ignition sources can range from the obvious, such as the electrical current applied by an electrosurgical unit during surgery, to the unsuspected. ECRI has investigated fires that have occurred during defibrillation, as well as those associated with the use of heated humidifiers, fiberoptic light sources, and damaged electrical cords, to name a few examples.

Surgical staff in acute care facilities are likely well aware of fire risks in the OR, where the use of supplemental oxygen in the presence of ignition sources is common. However, ECRI's investigations suggest that increased attention is needed to prevent fires in areas *outside the OR* to protect patients, staff, and others from the potentially devastating consequences of a fire.

The key to preventing fires is to prevent the three elements of the “fire triangle”—an oxidizer, a fuel, and an ignition source—from coming together in the proper proportions and under the right conditions. Clinicians, caregivers, and even patients need to understand the risks associated with each element and take proper precautions. Additionally, those present where supplemental oxygen is in use should know how to respond in the event that a fire occurs.

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