MARKEL INSURANCE COMPANY

Risk Management Tips

Smoke Alarms and Your Emergency Evacuation Plans

According to *Caring For Our Children—Health and Safety Standards*, 2nd Edition, child care centers should check smoke alarms monthly. Many centers also practice their evacuation plans at the same time. It's important to evaluate your current plan to ensure you have adequate time to evacuate everyone safely in case of fire. You may not have as much time as you think, according to the article "Safety Experts Question Effectiveness of Popular Smoke Alarms."

In the article, the head of Underwriters Laboratories' (UL) fire protection division cautioned that synthetic materials such as nylon and polyester in furnishings, fabrics, and carpeting have decreased the time for flashover to occur. Flashover is the sudden spread of flame over an area, and the most dangerous time during a fire—anyone trapped inside the room will not survive. Thirty years ago, the average flashover time was 12 to 14 minutes. Now it's about two to four minutes.

UL is re-evaluating smoke alarm standards to address the need for faster responding alarms. Current standards require alarms to respond within four minutes of a flaming fire and in a smoldering fire before smoke obscures visibility by more than 10% per foot.

There are two common types of smoke alarms:

• Ionizing alarms use a small, safe, radioactive pellet to detect smoke particles. These alarms tend to sound earlier in fast-burning, flaming fires.

• Photoelectric alarms detect changes in light patterns. These alarms tend to sound earlier in smoky fires that take time to transition to flames.

You might consider installing both types of alarms in your facility. Your local fire department can help you evaluate your smoke alarm's effectiveness. You can find out more about fire safety at the UL and National Fire Protection Association web sites: **www.ul.com** and **www.nfpa.org**.

If you have a safety or risk management question or a suggestion for a topic, please contact Markel's Risk Management Department at safety1st@markelcorp.com.