

## Mercury spills should be taken seriously

The CNA had spent the last 20 minutes stocking the supply room. She was inspecting the last package of medical supplies when she noticed a silver substance scattered on the desk.

Upon searching the shelf above, she traced it back to a box of blood pressure gauges. While opening the box, she heard broken glass and saw silvery dots of mercury falling onto the desk, chair and floor.

The CNA was fascinated as she watched the disbursement of mercury as it fell. It went everywhere--little beads fell into the tiniest places. She thought this shouldn't be too difficult to clean up with the vacuum cleaner. She was unaware that this was hazardous--a personal and environmental safety problem.

Many long-term care property claims revolve around building damage such as wind, hail and lightning. An unusual type of claim is in the area of environmental contamination--contamination to air, water or soil.

In health care, there are other potential contaminants that become health hazards like infectious diseases. Hazardous materials, including metallic mercury, can cause serious health problems such as neurotoxicity and seizures.

A "little spill" of mercury can be lethal. For an adult, the acute lethal dose for mercury compounds is 14-57 mg/kg or 1-4 grams.



**Dawn David, clinical research coordinator of Marshfield Medical Research Foundation, takes the blood pressure of patient Albert Meyer. The foundation is a subsidiary of the Marshfield Clinic in Marshfield, Wis. Medical personnel are instructed on the procedures to follow if the device is broken and mercury escapes.**

Harmful consequences of mercury occur at significantly lower thresholds for fetuses, infants, children and frail elderly.

Mercury exposures vary according to the products a facility uses and the amount of liquid mercury associated with each product. Other common products containing mercury include: fluorescent light bulb, 10-40 milligrams; thermometer, 0.5-0.7 grams; and a thermostat, 3 grams. Dental amalgams and many cleaning agents also contain mercury.

Human exposure to mercury occurs three ways. Many people think the physical contact would be the dangerous exposure, but exposure occurs primarily through breathing contaminated air. When a mercury source's container breaks, mercury beads fall everywhere. They get into the tiniest cracks and crevices. These droplets emit vapors into the air that we cannot see or smell. Breathing these vapors can be very dangerous. If left untreated, mercury will emit toxic vapors for

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# Keeping your facility, residents comfortable

There is a lovely breeze sweeping through Phoenix. The sun is shining, and if you're a resident sitting on the veranda from October through early May, it can't get better. However, from mid-May through September, life gets hot--really hot. During this period, the average temperature soars to 103-105 degrees.

To beat the heat, Ingrid Dawson, the owner and manager of Desert Paradise Assisted Living, has implemented a strategic plan that involves her entire facility--inside and outside. The color of siding, roofing, type of air conditioning, fans, windows, lighting and landscaping all have an effect on keeping a resident comfortable and safe.

Dawson's facility is painted a light cream color, and it has a medium terra cotta clay tile roof to keep the facility cool. Dark colors absorb and retain the heat. Light colors will reflect and absorb less heat.

Most of the roofs in Arizona are made of concrete and clay tiles or foam. The clay tiles are very durable and long lasting. These roofs are able to resist winds of 125 mph and are able to withstand one-inch hail. The tile roof offers better airflow to reduce attic heat. Clay tiles have proven to be safer

than the traditional roofing material such as shingle, shake or metal roofs.

Larger facilities use polyurethane foam for roofing. Usually, this includes a reflective coating to reduce the external roof temperature by 50 to 90 degrees. The foam provides a firm seal and allows the building's cooling and heating units to function more efficiently.

The facility has two heat pumps that also act as air conditioners. The heat pumps are serviced on a scheduled basis to maintain optimal working condition. Heat pumps can save 30 percent to 40 percent of electrical energy costs for heating or cooling. Ducts are also cleaned to remove any airflow resistance and are insulated to prevent loss of cool air in the summer and warm air in the winter. An alternative would be the evaporative coolers, also known as swamp coolers, that are very effective in the hot and arid climates.

Fans used in conjunction with the air conditioning systems are an energy efficient way to reduce heat. Strategically placed ceiling fans provide comfort and promote circulation of cool air. Ceiling fans have even been placed on verandas and covered patios. Dawson uses fans throughout her facility

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## Summer always a threat

In June 2001, nine residents from Northland Nursing Center in Detroit had to be hospitalized for heat-related illnesses. Three residents died.

Understanding the causes of heat-related illnesses and early identification of signs and symptoms, prompt prevention actions and treatment will minimize the risks of events like Northland being repeated.

"If someone is overheating, you have only minutes to do something about it," said Dr. Elizabeth Koller, an endocrinologist in FDA's Center for Drug Evaluation and Research. "You have to cool them down as quickly as you can. Once their brain is overheated, that's it."

To prevent resident heat-related illnesses, encourage the residents to wear loose fitting, lightweight clothing in hot weather, rest frequently, avoid activity during peak sun times and seek shade when possible. Encourage drinking fluids frequently and avoid drinking alcohol or beverages with caffeine. Closely watch residents taking drugs that impair heat regulation like diuretics and tranquilizers. ■

## Signs of heat illnesses

### Heat exhaustion due to water depletion

#### **Symptoms:**

- Excessive weight loss
- Reduced sweating
- Elevated skin temperature
- Excessive thirst
- Weakness
- Headache
- Unconsciousness

### Heat exhaustion due to salt depletion

#### **Symptoms:**

- Nausea
- Exhaustion
- Vomiting
- Muscle cramps
- Dizziness

### Heat stroke

#### **Symptoms:**

- Seizures
- Disorientation
- Unconsciousness

*Source: Detroit News*

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years. Eating contaminated food (fish) or drinking contaminated water is the secondary means of exposure. Skin contact is the last.

There are precise procedures for handling hazardous waste like mercury. Many local fire departments have teams comprised of certified hazardous material technicians that respond to any type of hazardous material emergency.

In case of a spill:

- Get people out of the spill area immediately.
- Keep uninvolved people and pets away until the spill is completely cleaned up.
- Blow fresh air into the area to dilute the mercury's invisible, odorless and harmful vapors.
- Try to determine how much was spilled. Call the Poison Control Center (1-800-815-8855) or your local fire department or department of health.

- Do not vacuum mercury with the facility vacuum as this will create more vapors and spread mercury throughout the facility.

Small spills are considered less than dime-size. Wear personal protective equipment, liquid proof gloves (polyethylene rubber or PVC) and eye protection. Spread sand, clay or sawdust in a circle around the spill to prevent the mercury from spreading. Scoop up the mercury with a small disposable dustpan or suck it up with a syringe or eyedropper and place the mercury in a sturdy, unbreakable container. Mercury spill kits are available through safety supply companies and some local health departments. The spill kits contain an "amalgamating" powder that will make the mercury solid and reduce the vapors. Place the mercury in a sturdy, unbreakable container when solid, after about 5-10 minutes.

Spills greater than dime-size should be handled by a hazardous

material cleanup professional. Call you local health department or fire department to assist in determining on how to handle the spill.

In the last several years, there has been a push to convert to nonmercury type devices. Electronic thermometers and nonmercury electronic digital or aneroid blood pressure devices are available and provide good accuracy.

Fluorescent lights are one mercury-containing product that is preferred in the marketplace as they last longer and use less energy than regular light bulbs while using minimal amounts of mercury.

Regardless of the type of damage or exposure, report environmental claims to your insurance claims department. Recycle all mercury-containing products instead of throwing them away in the trash. ■

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including each bedroom for the comfort of her residents.

Windows are treated with a special radiant barrier coating to the glass or special screens that reflect the heat instead of drawing it into the rooms. Southern views, in particular, are treated to reduce heat from the sun. Windows in the direct sun make the air conditioner work two to three times harder. Double-paned windows act as an additional barrier. The facility also has white exterior screens to reflect the heat while allowing airflow between the window and the screen.

Dawson's interior lighting is a combination of natural lighting, fluorescent and incandescent bulbs. Skylights strategically placed throughout the building provide natural lighting and

decrease the need for the use of supplemental heat producing light bulbs. The skylights also can have special screens placed over them that allow the light in but reflect the heat. Fluorescent lamps are more efficient, particularly in the kitchen and laundry room, by providing larger areas of light. Fluorescent bulbs produce less heat, consume less energy and will last six to ten times longer.

A facility's orientation on the property can influence the energy efficiency. A well-oriented, well-designed home rejects overhead summer sun, yet allows low-angle winter sun in to reduce heating bills. Fences, walls and other structures, including rows of trees or shrubs, provide protection from the sun and wind. Temperatures can vary as much as 3 to 6 degrees

with shade. Even bodies of water, like pools or waterfalls, provide landscaping as well as increase humidity to an arid region.

Driveways, walkways and pathways also need to be considered in the overall plan. To reduce the absorption of heat, blacktop is rarely used. Concrete and/or stone is often used to maintain a balance and reduce the heat.

There is no simple or single answer to reduce the summer heat. It is often a combination of maneuvers. Human behavior also plays a role. Educate residents, staff and families to keep windows and doors closed, to keep temperatures within a reasonable range and to promptly report any repairs needed. ■

# Covering the extra expenses after a loss

In the last issue of Long-Term Care Connection, I explained how business income insurance works. I outlined how the coverage pays you for your loss of income during the time your facility is being rebuilt or repaired if damaged by a covered peril such as lightning, fire and wind.

However, loss of income is only half of the story. During the rebuilding or repairing period, when you are unable to occupy your facility, you also will experience extra expenses to care for your residents.

If your facility were damaged, forcing you to evacuate for an extended period, what would your residents do?

Many facility operators have arrangements for their residents to receive care for a temporary period at another facility. There is

little doubt that this arrangement does not come without a cost.

Extra expense coverage pays for the actual and necessary extra expenses you sustain due to direct physical loss of or damage to your property by a covered peril.

This coverage will pay the extra expenses for moving your residents to a temporary premise and reimburses others for the use of their facilities. Of course, the biggest advantage of finding an alternative location for your residents is that you will have a greater chance of retaining them when your facility reopens.

It also will cover the extra expenses for a temporary administration or laundry building. It pays the cost to equip and operate at the temporary location. For example, you might need to put in new telephone lines or electrical hookups to make the

temporary location feasible for your needs. All of these examples are covered under the extra expense coverage, up to the limit shown on your policy.

There are a few different options for adding extra expense coverage to your insurance policy. The coverage can be placed on your policy with business income coverage or separately.

Different aspects will determine the type and the amount of coverage that is best for you. You should contact your insurance agent to help you evaluate your business income and extra expense insurance needs.

It is important to remember that extra expense coverage pays for the expenses only during the time your facility is being repaired or rebuilt. Once your building is ready for use, the coverage halts. ■



*Long-Term Care Connection* is designed to be a resource tool for the owners, operators and employees of long-term care facilities. Topics including insurance, risk management, health, safety and employment will be covered in the quarterly publication.

For more information on receiving *Long-Term Care Connection* or to submit a comment or story idea, please call Karen Osman at 1-800-554-2642, Extension 4459, or send her an e-mail at [kosman@churchmutual.com](mailto:kosman@churchmutual.com).

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## **Production Staff**

*Editor:* Rick Schaber

*Writers:* Karen Osman, RN, BSN  
Jim Mootz, Long-Term Care  
Underwriting Coordinator

*Document Services:* Mary Akey and  
Michelle English

*Distribution:* Tammy Gruling

This newsletter is printed by L&S Printing.

Published by Church Mutual  
Insurance Company,  
3000 Schuster Lane,  
Merrill, WI 54452  
1-800-554-2642  
[www.churchmutual.com](http://www.churchmutual.com)