

FACILITY NOTIFICATION
July 11, 2011

**RECOMMENDATIONS TO HEALTH FACILITIES FOR
HANDLING HEAT AND HUMIDITY IN SUMMER MONTHS**

During the summer, Michigan usually experiences high temperatures coupled with high humidity. While these conditions place a strain on everyone, the elderly are particularly vulnerable. Accordingly, each facility should assess the appropriateness of the policies and procedures it has developed and implemented to ensure that it is providing necessary care and treatment during this time. In this way, unnecessary suffering of residents during the summer months can be avoided.

Please review the following recommendations:

- 1. Keep the air circulating.** If your facility is not air conditioned, make sure there are an adequate number of fans for resident comfort in all areas used by residents. Each fan should be routinely inspected for cleanliness and operational safety. Open screened windows can be used during evening hours to cool the facility, if appropriate.

If the facility is air conditioned, the system should be routinely checked to ensure proper maintenance. Filters should be cleaned or replaced on a regular basis. Hours of functioning should be adjusted to maximize the effectiveness of the system. In general, the elderly cannot tolerate temperatures that are too low so a temperature of 78 degrees, with a lower relative humidity, is recommended as adequately cool in many public facilities.

State Rule R 325.21306(6) provides that

each area of the home shall be provided with a type and amount of ventilation commensurate with its use to minimize the occurrence of transmittable disease, control odors, and contribute to comfort.

State Rule R 325.21323 provides that

in a new construction, addition, major change or conversion after August 22, 1969, the design and operation of the filtered makeup air and exhaust air systems in the kitchen and dietary area shall be adequate for the comfort of employees and control of odors and shall minimize the danger of disease transmission.

Federal rules for long-term care facilities are found in **CFR 483.70, Physical Environment** and are more specific than the state rules. **Subparagraph (h)(2)** requires a safe and comfortable environment, with adequate ventilation;

Section 483.15(h)(6), Quality of Life, has a requirement to maintain comfortable and safe temperature levels. This section also states that facilities initially certified after October 1, 1990, must maintain a temperature level of 71-81 degrees F. The interpretive guidelines issued by the Centers for Medicare & Medicaid Services for this requirement indicated that

the ambient temperature should be in a relative narrow range that minimizes residents susceptibility to the loss of body heat and risk hypothermia or susceptibility to respiratory ailments and colds. Temperatures may, on rare, brief occasions exceed the upper range of 81 degrees F if these facilities are located in areas of the country (primarily at the northmost latitudes), where the temperature is exceeded only during rare, brief episodes of unseasonably hot weather... This interpretation applies only in cases where it does not adversely affect resident health and safety.

- 2. Draw all shades, blinds, and curtains in rooms when exposed to direct sunlight.**
- 3. Remove residents from areas that are exposed to direct sunlight.** Relocate residents to cooler areas in the building during the daytime hours. Also, it may be cooler outside in the shade in some instances.
- 4. Keep outdoor activities to a minimum.** If residents are outdoors for any length of time include adequate rest periods during activities. Remember, temperatures are hottest during the hours of 10:00 a.m. through 2:00 p.m. Discourage outdoor physical activity during these hours.
- 5. Check to see that residents are appropriately dressed.** Protect residents from direct sun with hats, clothing and sunscreen. Clothing should be lightweight, loose fitting, and that which easily absorbs body perspiration, i.e., cotton or other natural fibers. Residents who are confined to bed should be lightly covered with a clean, dry sheet and repositioned on a regular basis.
- 6. Provide ample fluids.** Excessive perspiration depletes large quantities of salt and fluid from the body. Increase the amount of water and fruit juices offered to residents. Encourage residents to drink more fluids.

Residents with circulatory or kidney problems who receive increased fluids should be monitored closely. Additional fluids and the heat and humidity may contribute to retention of fluids at a dangerous level; therefore, it is very important to check with attending physicians for specific orders. It may also be necessary to monitor the resident's weight on a daily basis.

- 7. Increase the number of baths given.** Bathing a resident in tepid water will help reduce the body's internal temperature and increase general comfort. This can also be accomplished, although not as effectively, by soaking a person's hands and wrists in cool water.

In addition to these precautionary measures, all nursing personnel shall be aware of the signs and symptoms of heat stroke and heat exhaustion, and provide continued regular monitoring and assessment. While the first symptoms of these disorders may be similar, later symptoms differ sharply.

Heat Exhaustion

Heat exhaustion, also known as heat prostration, is a disorder resulting from overexposure to heat or the sun. Long exposure to extreme heat or too much activity under a hot sun causes excessive perspiration, which removes large quantities of salt and fluid from the body. When the amount of salt and fluid in the body falls too far below normal, heat exhaustion may occur.

The early symptoms of heat exhaustion are headache and a feeling of weakness and dizziness, usually accompanied by nausea and vomiting. There may also be cramps in the muscles of the arms, legs, or abdomen. These first symptoms are similar to the early signs of sunstroke, or heat stroke, but the disorders are not the same and should be treated differently. In heat exhaustion, the person turns pale and perspires profusely; skin is cool and moist; pulse and breathing are rapid. Body temperatures remain at a normal level or slightly below or above. The person may seem confused and may find it difficult to coordinate body movement.

Treatment should include removing the person to a cool environment and encouraging increased consumption of fluids. If the condition is accompanied by cramps, the pain may be relieved by the gentle massage of the painful area. The physician should be notified promptly to obtain specific directions for care.

Heat Stroke

Heat stroke, also known as sunstroke, is a profound disturbance of the body's heat-regulating mechanism caused by prolonged exposure to excessive heat, particularly when there is little or no circulation of air. In heat stroke there is a disturbance in the mechanism that controls perspiration. Since heat stroke is much more dangerous than heat exhaustion and is treated differently, it is important to distinguish between the two. The first symptoms of both disorders may be similar: headache, dizziness and weakness. However, later symptoms differ sharply. In heat exhaustion, there is excessive perspiration and a normal or below normal temperature, whereas in heat stroke, there is extremely high fever and absence of perspiration.

Heat stroke also may cause convulsions and sudden loss of consciousness. In extreme cases, it may be fatal.

Heat stroke is considered a medical emergency and immediate steps must be taken to prevent death. The primary objective is to reduce the body's temperature as rapidly as possible. Immersing the person in a cool water bath or sponging the person with cool water can accomplish this. The physician should be contacted immediately and the resident transferred to the hospital.

Disorders of temperature regulation are particularly important, yet often unrecognized, in the elderly. Susceptibility is due to impaired homeostatic control mechanisms and to the frequency of multiple medical problems that occur with aging. Once an elderly individual develops heat illness, the prognosis is poor. Therefore, prevention is extremely important in the general care of the elderly. Many residents are unable to verbalize their discomfort. It is important to identify and monitor these residents and take extra precautions to ensure their safety.