

**September 16, 2002**

## **CARBON MONOXIDE DETECTORS IN QUARTERS**

**1. PURPOSE:** This Veterans Health Administration (VHA) Directive provides policy on the installation of carbon monoxide (CO) detectors in one and two-family and multifamily dwellings used as quarters on Department of Veterans Affairs (VA) property.

### **2. BACKGROUND**

a. Carbon monoxide is a silent killer. CO is an odorless and colorless gas that is toxic. CO results from incomplete combustion in heating equipment and internal combustion engines. When inhaled, CO is harmful since it replaces the oxygen in the bloodstream. Initial symptoms of CO poisoning are drowsiness, fatigue, dizziness, and headaches and can progress to confusion, loss of consciousness, and death. Hundreds of deaths per year are attributed to CO poisoning.

b. Likely sources of CO in homes are fuel burning equipment and from vehicle engines running in attached garages. The proper installation, use, maintenance, and adequate venting of these systems and equipment can minimize exposure from CO.

c. Fuel-burning equipment includes, but is not limited to, devices used for cooking, heating, lighting, or decorative purposes. Examples include: fireplaces, wood stoves, portable space heaters, ranges, furnaces, water heaters, charcoal grills, gas clothes dryers, gas refrigerators, and gas lamps.

d. CO detectors are now available at costs under \$100. These devices can detect this dangerous gas well below exposures where an individual begins to feel sick or fatigued. Detectors can be plugged into electrical receptacles or are battery powered and include a sensing element. The sensing element in battery-powered units must be replaced periodically. Nuisance alarms are possible but can be avoided if the device is properly located and maintained. CO detectors are not a substitute for smoke alarms nor are smoke alarms a substitute for CO detectors.

e. Additional guidance and information on the dangers of carbon monoxide and the application of CO detectors is available on the Internet via numerous sources.

f. A family living unit is considered to be one or more rooms in a single-family detached dwelling, single-family attached dwelling, multifamily dwelling, or mobile home for the use of one or more persons as a housekeeping unit with space for eating, living, and sleeping and permanent provisions for cooking and sanitation. This definition is meant to cover living areas only and not common use areas in multifamily dwellings such as corridors, lobbies, or basements.

**THIS VHA DIRECTIVE EXPIRES SEPTEMBER 30, 2007**

## VHA DIRECTIVE 2002-052

September 16, 2002

**3. POLICY:** It is VHA policy that one and two-family dwellings and multifamily dwelling units on VHA property that are occupied as quarters must be protected with CO detectors, if the dwelling has fuel-burning equipment, a fireplace, or is attached to a garage.

**4. ACTION:** The medical center Director is responsible for ensuring that:

a. By September 30, 2004, each family living unit of all one and two-family or multifamily dwellings used as quarters must have CO detectors installed, if the dwelling has fuel-burning equipment, a fireplace or is attached to a garage.

(1) CO detectors must be centrally located outside of each separate sleeping area in the immediate vicinity of all bedrooms.

(2) Detectors must be 120 volt AC-powered with battery backup and include digital display of CO levels.

b. CO detectors are properly installed in accordance with National Fire Protection Association (NFPA) 720, Recommended Practice for the Installation of Household Carbon Monoxide Warning Equipment, latest edition.

(1) CO detectors should be installed as specified by the manufacturer.

(2) CO detectors installed must be listed by Underwriter Laboratories (UL) as being in compliance with standard 2034.

c. Inspection, maintenance, and testing are in accordance with NFPA 720, Recommended Practice for the Installation of Household Carbon Monoxide Warning Equipment, latest edition.

(1) Detectors must be tested monthly.

(2) If used, chimneys and vents for heat producing appliances and equipment (furnaces, fireplaces, etc.) must be inspected periodically and cleaned or repaired as needed by a qualified individual.

(3) Fuel burning equipment must be inspected and maintained as needed to ensure safe operation.

d. Local policies on the safe operation of vehicles or fuel-powered equipment in attached garages are issued and enforced.

e. A minimum of one portable fire extinguisher is provided for each quarters' unit in accordance with NFPA 10, Appendix F. **NOTE:** *Additional extinguishers are to be provided as needed.*

f. Funding for the installation and maintenance of CO detectors is provided from income received from the quarters program.

**5. REFERENCES**

- a. NFPA 720, Latest Edition.
- b. UL 2034.
- c. NFPA 10, Latest Edition.

**6. FOLLOW-UP RESPONSIBILITIES:** The Director, Safety Management and Technical Services (10NB) is responsible for the contents of this Directive. Questions can be referred to 202-273-5869.

**7. RESCISSIONS:** None. This VHA Directive expires September 30, 2007.

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Under Secretary for Health

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