

**House Aging and Older Adult Services
Committee**

**Testimony on HB 1952 regarding CO Detectors
in Long-Term Care Facilities**

**W. Russell McDaid, M.H.A.
Vice President, Public Policy**

**PANPHA—An Association of Non-Profit Senior
Service Providers**

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Good Morning, Chairman Mundy, Chairman Hennessey, and members of the House Aging and Older Adult Services Committee.

I am Russ McDaid, Vice President of Public Policy with PANPHA—an Association of over 360 not-for-profit senior service providers statewide. Our members serve more than 65,000 older Pennsylvanians daily, employ over 45,000 dedicated caregivers, and tap the talents of more than 150,000 volunteers, trustees, and auxiliary members. PANPHA members serve older Pennsylvanians in 50 of 67 counties, providing affordable senior housing, adult day care, Assisted Living/Personal Care, nursing home care, and other community-based services. The vast majority of Pennsylvania's Continuing Care Retirement Communities (CCRCs)—where the concept of 'aging in place' started and is offered each and every day—are members as well.

PANPHA has had discussions with a number of you on the issue of carbon monoxide detectors in long-term care facilities, and has indicated that we take this issue very seriously. This continues to be the case, which is why we have done an extensive review of data and policy recommendations from the federal Centers for Disease Control (CDC), the National Fire Protection Association (NFPA), and the Consumer Product Safety Association in preparation for this hearing on HB 1952. We also researched state and local laws on carbon monoxide detection since there are often valuable lessons to be learned from the prior experience of other states and municipalities when drafting legislation.

Our review of the literature and data on carbon monoxide revealed the following information that we felt it important to share with the committee:

1. **THE REPORTING OF NON-FIRE RELATED DEATHS FROM CO POISONING IS STILL EVOLVING.** A review of the body of literature demonstrates that we still have much to learn about the true nature of Carbon Monoxide poisoning deaths in the U.S. The December 21, 2007 edition of the Morbidity and Mortality Weekly Report from CDC www.cdc.gov/mmwr contains a 6 year study of 'Unintentional, Non-Fire Related Deaths from CO Poisoning'. The study notes that an average of 439 persons per year died according, based on the information in this table included in the report:

TABLE 1. Unintentional, non-fire-related deaths from carbon monoxide (CO) poisoning,* by age group, sex, and race/ethnicity — United States, 1999–2004

| Characteristic | Total deaths | | 6-year average annual crude rate† | 6-year average annual rate† | (95% CI‡) |
|------------------------|--------------|-------|-----------------------------------|-----------------------------|-------------|
| | No. | (%) | | | |
| Total | 2,631 | (100) | 1.53 | 1.53 | (1.47–1.59) |
| Age group (yrs) | | | | | |
| 0–4 | 52 | (2) | 0.45 | — | — |
| 5–14 | 83 | (3) | 0.33 | — | — |
| 15–24 | 256 | (10) | 1.06 | — | — |
| 25–34 | 322 | (12) | 1.35 | — | — |
| 35–44 | 505 | (19) | 1.87 | — | — |
| 45–54 | 472 | (18) | 2.00 | — | — |
| 55–64 | 314 | (12) | 2.00 | — | — |
| ≥65 | 628 | (24) | 2.13 | — | — |
| Sex | | | | | |
| Male | 1,958 | (74) | 2.32 | 2.41 | (2.30–2.52) |
| Female | 673 | (6) | 0.77 | 0.74 | (0.68–0.79) |
| Race/Ethnicity¶ | | | | | |
| White, non-Hispanic | 1,941 | (74) | 1.65 | 1.54 | (1.48–1.61) |
| Black, non-Hispanic | 305 | (11) | 1.46 | 1.64 | (1.45–1.83) |
| Other, non-Hispanic | 97 | (4) | 0.98 | 1.01 | (0.80–1.22) |
| Hispanic | 279 | (11) | 1.25 | 1.31 | (1.14–1.48) |

* Deaths coded with *International Classification of Disease, Tenth Revision* codes T58 and X47, excluding X00–X09, X76, X97, Y26, and Y17.

† Average age-adjusted rate per 1 million persons.

‡ Confidence interval.

¶ Records in which ethnicity was unknown or missing were excluded from analysis (n = 9).

The report contains a second table, which shows the death rate in each state using data from the National Center for Health Statistics and the U.S. Census Bureau. We have pulled the 20 states with the highest death rates in a table for your information below.

1999-2004 6 Yr. Average Death Rate/Million Population

| STATE | DEATH RATE |
|---------------------|-------------------|
| Wyoming | 6.19 |
| Alaska | 4.88 |
| Nebraska | 4.32 |
| Montana | 4.16 |
| North Dakota | 3.20 |
| New Mexico | 3.07 |
| Iowa | 2.86 |
| Missouri | 2.77 |
| Idaho | 2.75 |
| Kentucky | 2.74 |
| Nevada | 2.54 |
| Indiana | 2.48 |
| Minnesota | 2.39 |
| Wisconsin | 2.36 |
| Colorado | 2.32 |
| Michigan | 2.13 |
| Illinois | 2.05 |
| Pennsylvania | 2.01 |
| Arkansas | 1.99 |
| Ohio | 1.99 |
| Vermont | 1.96 |

Source: Morbidity and Mortality Weekly Report, December 21, 2007

These data, unlike other morbidity and mortality data where the definitions of illness and/or cause of death from state to state, vary or are not reported at all in some states.

The MMWR article contains numerous 'Editors Notes' which assert various causes for distribution of deaths across gender, age, and ethnic lines. It notes that "... the results of this analysis indicate that men and adults aged ≥ 65 years were more likely to die from CO poisoning than other persons. The higher rate in men has been attributed to high-risk behaviors among men, such as working with fuel-burning tools or appliances", and "... CO deaths were highest during colder months, likely because of increased use of gas-powered furnaces and use of alternative heating and power sources used during power outages, such as portable generators, charcoal briquettes, and propane stoves or grills." It goes on to note data limitations in the study. The limitations can best be summarized as follows:

- a. Due to the lack of data collection during autopsy and the lack of availability of specific 'cause of death' coding, it is difficult to make good comparisons of causes of death.
- b. As summarized in the limitations section, "... additional research regarding their effectiveness is needed, including an evaluation of the cost effectiveness of CO alarms used in residences. As additional years of data become available, tracking of longitudinal trends in CO-related mortality should continue to guide public health measures aimed at preventing deaths from CO poisoning"
- c. "Additional surveillance that combines timely estimates of morbidity and mortality with situational information related to mechanisms of CO exposure (e.g., length of exposure, type of fuel-burning device involved, and behaviors or chain of events preceding exposure) could help target prevention measures and reduce CO poisonings".

Per the report, there are only 13 states which currently list Carbon Monoxide poisoning as a 'reportable condition' by physicians, laboratories, or hospitals—with the remaining 37 states, including Pennsylvania, failing to mandate such reporting.

2. THE DATA THAT IS AVAILABLE SHOWS THAT CO DEATHS OCCUR MOST FREQUENTLY AT HOME AND/OR OTHER SETTINGS WHERE 'HIGH RISK' HEATING SYSTEMS AND APPLIANCES ARE USED.

According to a 2000 report by the the U.S. Consumer Product Safety Commission, approximately 61% of all non-fire related unintentional carbon monoxide poisoning deaths occurred as a result of exposure to motor vehicle exhaust. The remaining 39% were associated with the use of consumer products, most frequently the use of heating systems. The most recent report available on the break out of consumer product caused deaths by carbon monoxide poisoning was published August 2007, and includes the annual death estimates from 2003 and 2004.

According to the August 2007 report, portable power generators were responsible for 27% of the CO deaths in the 2002-2004 timeframe, with furnaces (24%), and room/space heaters (20%) making up the vast majority of the remainder of deaths. In the same time period, a full 72% of all deaths incurred in homes—including mobile and manufactured housing, with another 17% occurring in 'temporary shelter', such as tents, RVs, cube vans, seasonal housing, and 'trailers'.

These data clearly illustrate that the vast majority of CO poisoning deaths occur 1) in situations where residents are in close proximity to known sources of carbon monoxide, and 2) in environments—homes and ‘temporary shelters’—where these sources are most likely to be used for heating.

- 3. STATEWIDE LEGISLATION OF CO DETECTOR INSTALLATION IS LIMITED, AND WHERE THEY HAVE REACHED CONCENSUS AS A STATE, THEY HAVE INCLUDED THE VENUES WITH DEMONSTRATED HIGHER RISK IN THE LEGISLATION ALONG WITH THE VARIOUS CARE SETTINGS.** According to an October 2007 tabulation by the National Conference of State Legislatures (www.ncsl.org), 12 other states have made the decision to put some type of enforcement of the installation of Carbon Monoxide detectors in law. (Alaska, Connecticut, Florida, Illinois, Maryland, Massachusetts, Minnesota, New Jersey, New York, Rhode Island, Texas, and Vermont). Only one state—Texas—limits the applicability to specific settings, requiring ‘ . . . qualifying day care centers, group day-care homes, and family homes’ to be equipped with detectors. All others with a statute mandating the installation of carbon monoxide detectors appear to have tailored their requirements around all dwellings and circumstances where known sources of carbon monoxide are likely to be present—not just nursing facilities and Assisted Living Residences/Personal Care Homes.

Based on this information, we would recommend the following to the Committee:

1. That you not move forward with this bill until carefully considering the available data on carbon monoxide poisoning deaths and locations, the reliability and cost of the 'sensor' technology currently on the market, and additional venues/settings to which the any detector requirement should apply.
2. If, after reviewing the available data, the Committee believes that the benefits of moving swiftly to require carbon monoxide detector installation in various settings outweighs the costs, then we would urge you to amend the bill, *adding the settings where deaths by carbon monoxide poisoning occur most frequently—private residences, cabins, RVs, and other places of 'temporary shelter' as listed in the various studies on the issue.* At a minimum, those persons receiving care in a private community-based residence should have identical protections (via inclusion in the bill as venues where detectors are required) as those residing in the current bill; and,
3. That carbon monoxide be added to the list of reportable conditions and/or diseases in Pennsylvania so that we can have state-specific, detailed information upon which to base this and future decisions related to carbon monoxide detector installation and/or education needs.

Thank you for the opportunity to offer testimony on this bill.