

ASPR TRACIE Technical Assistance Request

Requestor:

Requestor Phone:

Requestor Email:

Request Receipt Date (by ASPR TRACIE): 6 September 2017

Response Date: 13 September 2017

Type of TA Request: Standard

Request:

The requestor asked if ASPR TRACIE had any examples of carbon monoxide (CO) awareness campaigns nationally. He also asked for evidence-based and/or promising practices that have shown a reduction in CO related hospital or emergency department (ED) admissions.

Response:

The ASPR TRACIE Team conducted a search for resources on CO awareness campaigns, and promising practices related to the reduction in CO associated hospital/ ED admissions. Section I includes CO awareness campaigns in the U.S. In Section II, we also included several campaigns that were based internationally as they may also be helpful and were readily available online. Finally Section III provides various studies related to CO and hospitalization.

I. Carbon Monoxide Awareness Campaigns – In the U.S.

Centers for Disease Control and Prevention. [Carbon Monoxide Poisoning Prevention: A Toolkit.](#)

This toolkit presents research-based strategies for preventing CO poisoning. It was developed to support the CO poisoning prevention efforts of public information officers working within state departments of health, emergency management and preparedness, and consumer safety at the federal, state, municipal, and community levels. The messages and materials it contains can be used to develop effective communication activities or campaigns.

Lindsey O'Brien Kesling Wishing Tree Foundation. (2013). [2013 CO Awareness Campaign Wrap Up.](#)

This webpage provides information on a CO awareness campaign, a CO Awareness video (2 minutes and 32 seconds in length), and a coloring page for children.

National Fire Protection Association. (n.d.). [Carbon Monoxide.](#) (Accessed 9/12/2017.)

This webpage provides information about the dangers of CO exposure. It also includes several resources for families.

National Fire Protection Association. (n.d.). [Keeping Your Community Safe with Carbon Monoxide Alarms](#). (Accessed 9/12/2017.)

Public educators can use this tool to conduct community education campaigns. It includes safety tip sheets, easy-to-read handouts, talking points, news releases, a video, and public service announcements.

Safe Kids Worldwide. (n.d.). [Carbon Monoxide](#). (Accessed 9/12/2017.)

Safe Kids Worldwide is a global organization dedicated to protecting kids from unintentional injuries. This webpage provides information specific to CO, infographics, fact sheets, and other resources.

WPTV. (2017). [Carbon Monoxide Awareness Campaign](#).

This 54 second video from West Palm Beach, Florida discusses the campaign that the Palm Beach County Fire Rescue team launched to raise awareness about CO poisoning. Specifically, it addresses the hazards of individuals starting their keyless cars and leaving them running unattended in the garage, which can lead to deadly outcomes.

II. Carbon Monoxide Awareness Campaigns – International

Carbon Monoxide Awareness Ltd. (n.d.). [CO Awareness Homepage](#). (Accessed 9/12/2017.)

This campaign, based out of the UK, fights for changes in the legislation to improve safety related to CO poisoning.

Carbon Monoxide – Be Alarmed! (n.d.). [Carbon Monoxide – Be Alarmed! Homepage](#). (Accessed 9/12/2017.)

This website provides information on a campaign, based out of the UK, which helps to reduce the number of deaths and injuries caused by CO. Since 2008, the campaign has encouraged people to install carbon monoxide alarms in their homes.

Cheshire Fire and Rescue Service. (n.d.). [Carbon Monoxide Awareness](#). (Accessed 9/12/2017.)

This webpage provides information on a CO awareness campaign based out of the UK. It also provides leaflets for download.

Energy Safe Victoria. (n.d.). [Beware Carbon Monoxide – It's a Silent Killer](#). (Accessed 9/12/2017.)

This webpage includes a 30 second video about deadly CO poisoning, and other related information.

Gas Networks Ireland. (n.d.). [Carbon Monoxide. The Facts](#). (Accessed 9/12/2017.)

This website provides information on a CO campaign based out of Ireland.

Gas Safe Charity. (n.d.). [Gas Safe Charity Homepage](#). (Accessed 9/12/2017.)

This website includes information on a campaign based out of the UK that provides support and resources related to CO poisoning.

Project SHOUT. (n.d.). [Project SHOUT Homepage](#). (Accessed 9/12/2017.)

This campaign, based out of the UK, raises awareness on the dangers of CO poisoning. The website provides information on how individuals can protect themselves from CO poisoning.

Technical Standards and Safety Authority. (n.d.). [The Silent Killer – Carbon Monoxide Awareness Campaign](#). (Accessed 9/12/2017.)

This public awareness campaign is based out of Canada. The Silent Killer concept uses a movie-trailer theme to maximize engagement and bring CO safety and awareness to life in a compelling way.

III. Carbon Monoxide Studies

Ballew, C., Custis, C., and Frazier, J. (2010). [Carbon Monoxide Morbidity and Mortality in Montana, 2000 – 2008](#). Montana Hospital Discharge Data System. Quarterly Surveillance Report.

The authors of this report address risk factors as to why Montana had mortality rates substantially higher than the national average, including harsh winter weather; poorly maintained or improperly vented furnaces and water heaters; tightly sealed houses; use of gas-powered generators and combustion heat sources during power outages, as supplemental heat, or in outbuildings; and prolonged warming up of vehicles in garages or near building air intakes.

Centers for Disease Control and Prevention. (2017). [Carbon Monoxide Poisoning](#).

This webpage contains several CO resources related to mortality, hospitalizations, ED visits, health behaviors, and other data.

Harduar-Morano, L., and Watkins, S. (2011). [Review of Unintentional Non-Fire-Related Carbon Monoxide Poisoning Morbidity and Mortality in Florida, 1999–2007](#). Public Health Reports. 126(2): 240–250.

The authors of this study reviewed data from 1999 to 2007 related to unintentional poisonings, calculating rates for age, gender, race, and ethnicity, and reviewing poisoning chronology, location, and exposure situation. They concluded that there is a need for additional prevention strategies in conjunction with current activities to more effectively reduce the number of CO poisonings in Florida. They also suggested prevention activities should be conducted year-round, and additional strategies should include public awareness of the hazards of motor vehicle exhaust.

Iowa Department of Public Health. (n.d.). [Carbon Monoxide: Emergency Department Visits for Carbon Monoxide](#). (Accessed 9/12/2017.)

This brief report addresses how Iowa calculated the number of ED visits related to CO. The data can be used to assess the burden of severe CO poisoning, monitor trends over time, identify high-risk groups, and enhance prevention, education, and evaluation efforts. Note: Although this data is outdated, it may provide some helpful information.

Iowa Department of Public Health. (2016). [Metadata for Carbon Monoxide Poisoning Emergency Department Visits](#).

The Iowa Department of Public Health conducted a study on the number of ED visits and CO poisoning. Note: This report does not display numbers. However, the following email address is provided on the website should you wish to ask for additional information: EPHT@idph.iowa.gov.

Iqbal, S., Clower, J.H., Boehmer, T.K., et al. (2010). [Carbon Monoxide-Related Hospitalizations in the U.S.: Evaluation of a Web-Based Query System for Public Health Surveillance](#). *Public Health Reports*. 125(3): 423–432.

The objective of this study was to generate the first national estimates of CO-related hospitalizations and to evaluate the use of a Web-based query system for public health surveillance. The authors of this study used data from 1993 through 2005 Healthcare Cost and Utilization Project's Nationwide Inpatient Sample to describe trends in CO-related hospitalizations. Results indicated that CO-related hospitalization rates declined from 1993 through 2000 and plateaued from 2001 through 2005.

Iqbal, S., Clower, J.H., Hernandez, S.A., et al. (2012). [A Review of Disaster-Related Carbon Monoxide Poisoning: Surveillance, Epidemiology, and Opportunities for Prevention](#). *American Journal of Public Health*. 102(10): 1957–1963.

The authors of this study conducted a systematic literature review to better understand aspects of disaster-related CO poisoning surveillance and determine potentially effective prevention strategies. They concluded that public health prevention efforts could benefit from emphasizing predisaster risk communication and tailoring interventions for racial, ethnic, and linguistic minorities.

Iqbal, S., Clower, J.H., King, M., et al. (2012). [National Carbon Monoxide Poisoning Surveillance Framework and Recent Estimates](#). *Public Health Reports*. 127(5): 486–496.

The authors of this study describe how a comprehensive national CO poisoning surveillance framework is needed to obtain accurate estimates of CO poisoning burden and guide prevention efforts. This article describes the current national CO poisoning surveillance framework and reports the most recent national estimates. The authors concluded that systematic evaluation of data sources coupled with modification and expansion of the surveillance framework might assist in developing effective prevention strategies.

Massachusetts Department of Public Health. (n.d.). [Carbon Monoxide Poisoning](#). (Accessed 9/12/2017.)

The Massachusetts Environmental Public Health Tracking program has identified the need for surveillance of unintentional CO poisoning to support public health prevention and intervention activities. Data on hospitalization visits are collected by the Massachusetts Center for Health Information and Analysis from all acute care hospitals and satellite emergency facilities in the state. This webpage provides considerations when reviewing and interpreting CO poisoning data.

New Mexico Department of Health. (n.d.). [Health Indicator Report of Carbon Monoxide Poisoning Emergency Department Visits](#). (Accessed 9/12/2017.)

This report provides data on the number of ED visits in New Mexico related to CO poisoning. The data was based on the ICD codes from New Mexico Emergency Departments, 2008 – 2015.

Sircar, S., Clower, J., Shin, M., et al. (2015). [Carbon Monoxide Poisoning Deaths in the United States, 1999 to 2012](#). The American Journal of Emergency Medicine. 33(9): 1140–1145.

The authors of this study provide estimates on unintentional, non-fire related CO poisoning mortality in the U.S. and characterizes the at-risk populations. They concluded that CO poisoning was the second most common non-medicinal poisonings death. They also suggested that developing and enhancing current public health interventions could reduce ongoing exposures to CO from common sources, such as those in the residential setting.

Unknown Author. (2011). [New York City's Carbon Monoxide Surveillance](#). Centers for Disease Control and Prevention.

This brief report addresses how New York City enacted a law in 2004 requiring CO alarms in residential and many public buildings, and updated the Health Code to make CO poisoning immediately reportable by telephone to the Department of Health and Mental Hygiene/New York City Poison Control Center. Along with the surveillance of poisoning outcomes, the Department also monitors prevention efforts. In 2009, the annual Community Health Survey included a question about the presence of smoke and CO alarms in the home and when the batteries were most recently checked or replaced. The Department's Newborn Home Visiting Program, conducted in communities with high rates of poor health outcomes, includes a visual inspection for smoke and CO alarms in the home.

Utah Department of Health. (n.d.). [Complete Health Indicator Report of Carbon Monoxide: Hospitalizations and Emergency Department \(ED\) Visits](#). (Accessed 9/12/2017.)

This webpage provides information and data collected related to CO hospitalizations in Utah. Data is provided from 2000-2014.

Wheeler-Martin, K., Soghoian, S., Prosser, J.M., et al. (2015). [Impact of Mandatory Carbon Monoxide Alarms: An Investigation of the Effects on Detection and Poisoning Rates in New York City](#). American Journal of Public Health. 105(8): 1623–1629.

The authors of this study evaluated the impact of New York City’s 2004 CO alarm legislation on CO incident detection and poisoning rates. They concluded that mandating CO alarms significantly increased the detection of potentially hazardous CO levels in New York City homes.