

Carbon Monoxide Poisoning

DESCRIPTION

Carbon monoxide (CO) is a colorless, odorless gas produced from gas furnaces, stoves, water heaters, portable generators and other gasoline or diesel engines. Inhaling large quantities of CO can cause carbon monoxide poisoning resulting in illness (including headache, dizziness, upset stomach, vomiting, chest pain and confusion) and death. Carbon monoxide poisoning is entirely preventable by installing and maintaining carbon monoxide detectors in residential housing and properly venting and maintaining appliances and motor vehicles.¹ As of May 1, 2017, a Minnesota law states that all motorboats with an enclosed accommodation area must be equipped with a marine CO detector. Gas powered boats with enclosed occupancy areas must display three CO warning stickers.² State law also requires CO alarms in all single and multi-family Minnesota residences, within ten feet of each room used for sleeping.

HOW WE ARE DOING

Between 2011 and 2015, there were 94 visits to emergency departments and 8 deaths due to CO poisoning among Ramsey County residents (down from 185 visits to emergency departments and 10 deaths in the previous 5-year span). The number and rate of CO deaths are likely related to the severity of winter. During cold winters heating devices are used more often, increasing the risk of CO poisoning. Overall, Ramsey County had a lower rate of carbon monoxide poisonings in the years 2011-2015 than did the state of Minnesota. The rate of CO poisoning ED visits is lowest among females aged 65+ and highest among adults between age 15 and age 34, and males overall.³

DISPARITIES

Limited research suggests that Hispanic and black populations may be at greater risk for CO poisoning than white populations.⁴

RISK FACTORS

Everyone is potentially at risk for CO poisoning. Infants, the elderly, people with chronic heart disease, anemia, or breathing problems (such as asthma or emphysema) are more likely to get sick from exposure to CO.⁵ Those living in homes with an older or malfunctioning heating system are at increased risk for carbon monoxide poisoning. Homes with fuel-burning appliances or attached garages are more likely to have CO problems.⁶

WHAT RAMSEY COUNTY GOVERNMENT IS DOING

Saint Paul- Ramsey County Public Health partners with the MN Department of Health and the MN Department of Public Safety to provide the public with winter safety information, including how to protect one's self and family from carbon monoxide poisoning. Through its internal policy on motorized equipment idling policy, Ramsey County instructs its employees to reduce idle time and ensure adequate ventilation of fuel exhaust from all vehicles and mobile motorized equipment used for county operations.

Information to note

- Between 2011 and 2015, the number of emergency department visits went down approximately 50% compared to the previous 5-year span, and the number of deaths was reduced by 20%.
- Carbon monoxide poisoning is entirely preventable.

¹ Carbon monoxide poisoning. Centers for Disease Control and Prevention. <https://www.cdc.gov/co/>. Accessed November 8, 2017.

² Sophia's law – carbon monoxide law for boaters. Minnesota Department of Natural Resources. <http://www.dnr.state.mn.us/safety/boatwater/sophias-law.html>. Accessed November 8, 2017.

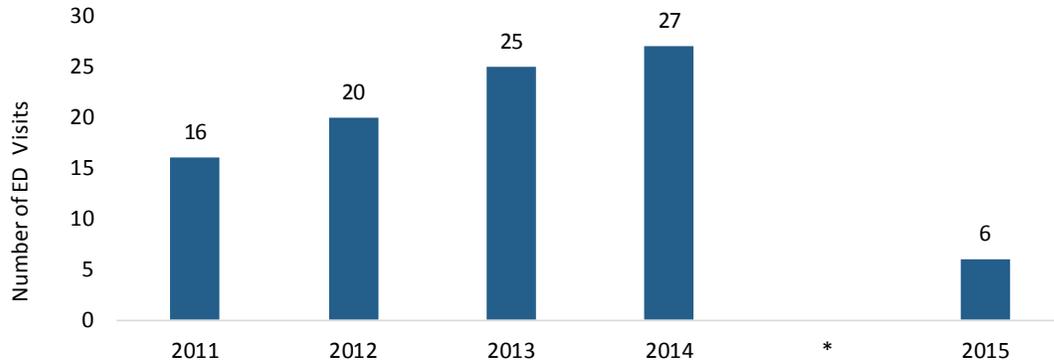
³ CO poisoning ED visits: facts and figures. Minnesota Department of Health. https://apps.health.state.mn.us/mndata/carbon_monoxide_ed. Accessed November 8, 2017.

⁴ California Environmental Tracking System. http://cehtp.org/faq/co/carbon_monoxide_poisoning_who_is_at_risk#_faq_4. Accessed June 29, 2018.

⁵ What is carbon monoxide? Centers for Disease Control and Prevention. <https://www.cdc.gov/co/faqs.htm>. Accessed November 8, 2017.

⁶ Carbon monoxide sources in the home. Minnesota Department of Health. <http://www.health.state.mn.us/divs/eh/indoorair/co/index.html>. Accessed November 8, 2017.

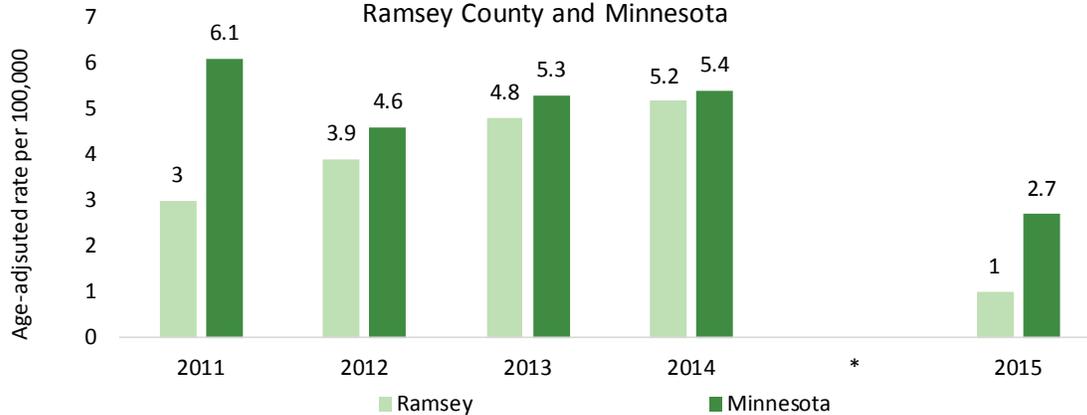
CO Poisoning Emergency Department Visits, Ramsey County



* Indicates a change in International Classification of Disease coding from ICD9 to ICD10. Rates from 2000-2014 should not be compared to rates from 2015 and later.

Source: Minnesota Department of Health.⁷

Rate of CO Poisoning Emergency Department Visits, Ramsey County and Minnesota



* Indicates a change in International Classification of Disease coding from ICD9 to ICD10. Rates from 2000-2014 should not be compared to rates from 2015 and later.

Source: Minnesota Department of Health.⁷

⁷ MN Tracking Program, MDH. CO poisonings are unintentional, non-fire-related. <https://data.web.health.state.mn.us/co>. Accessed June 20, 2018.