

Cadmium from glass factories: A risk to neighbors?

AUTHOR(S): Brendon Haggerty, Perry Cabot, Paul Lewis

PRESENTATION FORMAT: Oral Presentation

TOPIC/TARGET AUDIENCE: Public health professionals interested in air quality, toxicology, spatial analysis, and public health ethics

ABSTRACT: **Problem:** In October 2015 air monitoring data confirmed intermittently elevated atmospheric levels of cadmium in two Portland neighborhoods near art glass factories. An analysis for metals of tree moss collected in 2013 as part of a US Forest Service research study prompted the formal air monitoring. It is unknown if this type of exposure causes harm or elevated body burden of cadmium. **Methods and Analysis:** Widespread public concern led many people to be tested for cadmium exposure at a variety of laboratories. Since the Oregon Health Authority made cadmium detection a reportable condition in February 2016, we analyzed all cadmium test results in Multnomah County residents between that time and June 2016. We offered confirmatory testing at a CDC accredited lab to individuals with urine cadmium levels above the 95%tile for their age. We investigated exposures of those with confirmed elevated urinary cadmium to assess the role of atmospheric exposure. **Conclusions:** Our results demonstrate the challenge of establishing relationships between environmental exposure and health outcomes and the limits of interpretation of data from a self-selected group.

OBJECTIVE(S):

- Describe limitations of analyzing test results from a self-selected population;
- Discuss the ethical implications of advising testing in an environment with very limited information
- Understand the contribution of atmospheric metals to total exposure

PRIMARY CONTACT INFORMATION:

Paul Lewis, MD, MPH
Multnomah County Health Officer
Multnomah County
Portland, OR
5033093482 | paul.f.lewis@multco.us