

## **TOPIC AREA: Tracking Data – Tracking of hazard, exposure and/or health outcome data**

**Title:** Use of Vital Statistics and Hospital Discharge Databases for Tracking Carbon Monoxide Poisonings and Targeting Interventions

**Keywords:** carbon monoxide; CO; surveillance

**Background:** Carbon monoxide (CO) poisoning significantly contributes to the total number of accidental injury and deaths. Carefully developed interventions can be used to reduce this number, however, this first requires the identification of risk factors and populations to target.

**Methods:** A full review of Wisconsin's mortality and hospital discharge databases was conducted to identify the demographic characteristics of victims of accidental CO poisoning, and the temporal patterns for such events. Attempts were made to characterize the nature of each incident based on the available data.

**Results:** As expected, there are seasonal trends with more poisonings during the winter months than in warmer times of the year. There are also sex and age related patterns for CO poisonings. The analyses resulted in the generation of multiple hypotheses for patterns in underlying causes of the poisonings and exposure scenarios, but it was not possible to discern this type of information from these databases.

**Conclusions:** It was possible to use the mortality and hospital discharge databases to characterize the victims of CO poisoning. However, it was not possible to typify the exposure scenarios. Alternative strategies, such as systematic review of medical records and death certificates, and collaborations with local utility companies and fire departments, will be necessary in the future to better understand how and why accidental CO poisonings occur.

**Evaluation:** The hospital discharge and vital statistics electronic datasets are useful for identifying at-risk populations and consequently indicating target audiences for intervention strategies. The datasets are not adequate for characterizing the exposure scenario, although this information would sharpen the focus and likely increase the effectiveness of intervention strategies.

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