

## **Prevalence of Carbon Monoxide Poisoning in Patients Presenting to a Large Emergency Department**

Roth D., Schreiber W., Herkner H., Havel C. *Int J Clin Pract.* 2014 Apr 2.

### **Aims**

Carbon monoxide (CO) can cause lethal intoxication, but the burden of occult CO poisoning is still unclear. We aimed at prospectively assessing the number of patients with occult CO poisoning presenting to an emergency department within one year.

### **Methods**

Prospective, observational study according to the Strengthening the Reporting of Observational studies in Epidemiology (STROBE) statement for cross sectional studies at a European high volume tertiary-care emergency department.

### **Results**

Thirty-two thousand three-hundred and ninety-six consecutive patients whose vital signs were assessed at triage, regardless of their complaints. Active screening for CO-poisoning by non-invasive CO-oximetry was performed at triage. A pragmatic diagnosis of CO poisoning was made by attending physicians in 32 cases, representing 99/100,000 emergency department (ED)-patients. Three different definitions of poisoning were developed based on physicians' decision criteria, resulting in 9, 12, and 48 cases, respectively.

### **Conclusions**

In our study population, the prevalence of CO poisoning was twice as high as previously reported. The number of cases highly depends on the definition used, with more strict definitions excluding mainly cases during the summer months, where the source of CO often remains unknown. A clear consensus on which patients have to be regarded as 'poisoned' is urgently needed in order to allow comparison across studies.