The Economics of Carbon Monoxide Poisoning*

By Joe Laquatra and Daniel Cullen

According to the National Safety Council and the Centers for Disease Control and Prevention, 500 to 1,000 people are killed in their homes in America by carbon monoxide each year. This cost of life is immeasurable in human terms. In economic terms, however, we can make some estimates. Using March 2000 US Bureau of Labor Statistics data, civilian workers earn on average $44,013 annually in wages and salaries plus benefits. Using the insurance industry life valuation formula (http://www.life-line.org/life/life_value.html), the Human Life Value total to retirement of a 30-year-old person earning average compensation, with plans to retire at 65, is $1,359,343. If 750 such persons were to die this year, the economic cost nationally would be $1,019,507,250.

How this figure was calculated:

Average compensation of a civilian worker:

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\text{Average compensation of a civilian worker} = 21.16 \\
\text{40 hrs./week} \times \text{52 weeks} = 2080 \\
\text{Annual compensation} = 44,012.80
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The annual compensation was entered into the LIFE-Line Human Life Value Calculator (http://www.life-line.org/life/life_value.html). This interactive Web Site calculates the financial burden imposed upon families by the death of an individual. The calculator requires the user to select values for personal maintenance expenses (food, transportation, etc.) as a percentage of annual income, age, retirement age, annual rate of increase in income, discount rate, and average tax bracket.

Consider the cost of preventing carbon monoxide poisoning:

Annual servicing of an oil or gas central heating system is about $200. A carbon monoxide detector costs between $30 and $60, not including batteries.

Most deaths from carbon monoxide poisoning can be prevented by:

- having a heating system serviced every year;
- not using unvented space heaters in the home;
- not idling a car in a closed garage; not using a gas oven to heat a home;
- not using gasoline-powered engines in enclosed spaces.

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2 We estimated 45% of annual income for personal maintenance expenses for a 30-year old person who plans to retire at 65, 4% annual rate of increase in income, discount rate of 6%, 35% average tax bracket.

*This article originally appeared in the Summer 2000 issue of Housing and Home Environment News*