On My Mind

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A Price on Your Head

Are you worth $7 million?

THE ENVIRONMENTAL PROTECTION Agency created a political firestorm back in 2003 with an analysis that calculated that the lives of those over age 70 were worth 37% less than the lives of younger people. Citizen groups for the elderly were outraged at this "senior death discount" and ultimately the EPA withdrew the report. Discussion of age distinctions are off the table now, but the government routinely places a dollar value on lives saved by regulation.

Although some may consider it immoral to even raise the question of the dollar value of life, risk regulation agencies can't avoid doing so. We would soon exhaust all of our resources if we tried to do everything that would make our lives safer. A zero pollution, risk-free society is unattainable.

To see why putting a price tag on expected lives saved makes sense, it is helpful to see where these numbers come from. The economic value of life is not the total of one's lifetime earnings, the taxes we contribute or any other accounting measure that seems like economics. Rather, the value of life reflects what people are willing to spend to reduce small risks of death.

Consider the market for risky jobs. Suppose that on average, workers face a fatality risk of 1/10,000 of being killed each year and that they accept this risk in return for an extra $700 in annual wage compensation. This means that if 10,000 workers faced a similar risk, on average one worker would die, and so firms would pay a total of $7 million in compensation for the one expected death. The value of a statistical life is consequently $7 million in this example, and the number cited generally by most reliable estimates. A considerable economics literature has documented the extra pay that workers receive for fatality risks, the lower prices that risky products command and the lower housing prices for houses in dangerous areas.

This number does not imply that people would accept certain death if paid $7 million or that they could come up with $7 million to buy out of certain death. Rather, it captures the rate

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at which people are willing to spend money to reduce risk.

Most government agencies, in assessing the cost impact of regulations, use value-of-life numbers on the order of $5 million to $7 million per expected life saved. But how much they really spend to save lives is another matter. Sometimes it's driven by legislative mandates that do not require risk-cost tradeoffs. Superfund hazardous waste cleanups, for example, prevent cases of cancer at a cost of billions of dollars per expected case.

The U.S. Department of Transportation, on the other hand, historically used wrongful death judgments to value life. It now places a value of $3 million per life for efforts such as improving airline safety, a figure that is too low and will produce too little safety regulation.

The question that the EPA was courageous enough to confront in 2003 is whether all lives should have the same value. Should we value the lives of the old the same as the young, the rich the same as the poor and voluntary risk takers the same as those who choose safer lifestyles?

The age difference represents a good starting point for thinking about such distinctions. The biggest gains in life expectancy generally result from saving the lives of the young. But going back to first principles, what matters in valuing life is people's willingness to pay to reduce small risks of death. Those values go up as we age, along with overall spending. The fact that 60-year-olds drive safer cars and lead safer lives than their children is not a coincidence. Labor market studies show that workers at age 60 have a higher value of statistical life than workers at age 20.

For those with very short life expectancies, the value of statistical life does decline. How much is not known. But to effectively reduce risks, agencies such as the EPA must grapple with the types of unpleasant tradeoffs raised in its senior death discount analysis. If air pollution regulations are expected to increase the life expectancy of those with advanced respiratory disease by two months, is doing so really as valuable as adding 70 years of life expectancy by preventing the deaths of as many children? **F**