Whose Life Is Worth More? (And Why Is It Horrible to Ask?)

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Imagine you're the mayor of a small town. The hot line rings, and you learn that both the town nursing home and the nursery school are in flames. Eleven octogenarians are trapped in the home, and 10 toddlers are trapped in the school. The fire chief needs to know where to send the town's only pumper. What to do in the face of this "Sophie's Choice"?

If certain senior groups had their way, it would be a no-brainer: All lives would be worth the same regardless of age, so 11 nursing home residents would always trump 10 toddlers. That was the message Environmental Protection Agency Administrator Christine Todd Whitman recently got from seniors incensed at learning that the EPA used "age-adjusted analysis" -- in which their own lives would be considered less valuable than those of younger people -- in doing a cost-benefit analysis of its newly proposed anti-pollution legislation.

Of course, the seniors and advocacy groups who muscled Whitman didn't cast the dilemma in such graphic terms. Nevertheless, a cowed Whitman backed off what critics call the "senior death discount," announcing that the EPA would not use age adjustments. She shouldn't have, even if tangling with the AARP can be more dangerous to a politician than blocking the entrance to the Boca Raton Sizzler when it opens for the early bird special. The unavoidable truth is that good policy often can't be made without deciding what factors matter in calculating the value of a life, including the age of the people at risk.

In many cases, more information can make a big difference. Suppose the mayor knew that the nursing home residents all had less than a month to live. Opting to save the kids surely would be the less debatable -- if not less tragic -- choice. Such information is actually critical to decisions about saving lives that politicians and regulators must routinely make -- decisions about everything from choosing to install high-tech security devices at airports to requiring anti-pollution equipment in power plants to setting safety standards for baby cribs.

To make reasonable decisions, scholars and policymakers generally agree that we need some way of adding up potential costs and benefits in terms of lives saved and lives lost. Where they disagree is how to do the adding.

That's where the current controversy started. When EPA officials set out on a "listening tour" of cities including Tampa, San Antonio and Iowa City to learn which environmental health hazards most troubled senior citizens, they got more than they bargained for. They were treated to tirades from senior citizens, senior advocates and environmental groups on how seniors were particularly miffed about a procedure for estimating benefits that assumed that their lives were worth less than the lives of younger people -- 37.8 percent less, to be precise.
The catalyst for the controversy is the Bush administration's pending "Clear Skies" legislation, which would control fine soot particles by setting caps on certain emissions from power plants. The EPA reckons that by 2010, its proposed plan could prevent up to 6,400 premature deaths, nearly 4,000 cases of chronic bronchitis, 6,300 hospital visits, and some 8 million minor respiratory illnesses or symptoms.

So far, so good. It's the details of how the EPA translated health benefits from the proposal into dollars that ignited the seniors and their advocates. Not because the age adjustment caused the proposal to fail a cost-benefit test -- even with the adjustment, the EPA said, it passed. No, they were upset because the agency estimated benefits using both an across-the-board value of $6.1 million per statistical life saved, and a controversial alternative that values the life of those over 70 at $2.3 million and the life of younger people at $3.7 million. The seniors correctly perceived that such a discount would tilt the playing field toward investments that save more children than seniors.

Even economists, it should be understood, do not have the arrogance to place a price tag on any specific individual's life to determine how the government should regulate pollution, or whether, for instance, it should require side airbags on cars. Instead they look at how much extra cash individuals, on average, are willing to pay for a slightly better chance of living healthier or longer lives. Will people, for instance, pay $30 for a carbon monoxide detector in the basement that reduces the chance of dying prematurely by, say, one one-thousandth of a percent? Or the researchers examine how much more someone must be paid to take a risky job, such as working in a coal mine. Toiling above ground in the mine office may pay $4 an hour less, but some folks would rather sacrifice the income for the relative safety of a desk job. Economists then use this information to estimate the value of a statistical life.

But social scientists disagree about whether seniors actually value their lives less -- in other words, whether they would actually pay less for small reductions in risk -- and about how that information should be used to save lives. Research aimed at estimating the "senior discount" (or premium) has not produced consistent results. And some researchers argue that it would simply be better to evaluate policy based on more concrete measures, such as the likely number of additional life-years that would be gained from a particular policy. If a medical intervention yields an additional life-year at a cost of $100,000, while a reduction in pollution yields it at a cost of $1 million, the life-year approach would favor the medical intervention.

Because of legitimate differences of opinion over how best to evaluate policies, the EPA estimated benefits both with the senior discount and without it. It is precisely because research translating life and health benefits into dollars yields a range of answers that regulators should be encouraged to plug in alternative estimates to see if they really make a difference for policy choices. If, for example, several alternatives lead to the conclusion that a policy's likely benefits are greater than the costs of that policy -- as seems to be the case with Clear Skies -- then there's no need to make a decision about using one value-of-life calculation instead of another. But in some cases, different assumptions can lead to different answers. Indeed, environmentalists made an issue of the EPA's alternative method because other regulations they favor won't pass a benefit-cost test that uses it. And while the Bush administration may not care too much about winning over environmentalists, its response suggests that it did not want to take on the AARP. That position is shortsighted.

The administration's policy fiasco teaches three important lessons. First, there is no getting around the fact that regulatory policies will always yield winners and losers. The challenge for elected officials is to devise approaches that are both grounded in good research and sufficiently consistent to give politicians and regulators the moral high ground when challenged by interest groups. To that end, Congress should insist that all regulations pass a broadly defined benefit-cost test that is based on good science, and leave the implementation to the appropriate executive agencies. Given the current state of thinking, we suggest that they use a wide range of measures, including ones that implicitly or explicitly value seniors' lives less than those of younger people for policy-making purposes.

Second, despite the possible political costs, elected officials need to be willing to defend legitimate tools of regulatory analysis. The alternative is a system in which every decision that offends someone can be taken off the table, exposing the whole process to cynical interpretation and making good policy far more difficult to implement.

Third, Congress and the White House need to take a more active role in designing regulatory institutions that do a better job at making smart life-saving investments. One way is to focus on how we set priorities: Regulators should be required to place more emphasis on rules that generate a bigger bang for a buck. The president's budget office has argued, for example, that we could get a big bang by requiring automatic defibrillators in workplaces to resuscitate people who have heart attacks. A Harvard study suggested that simply changing the mix of investments we make in either medical care or environmental protection could save tens of thousands of lives at no additional cost.
There's no way to shield politicians and the regulators they appoint from the need to make difficult life-or-death choices. But scientists could make the task easier by equipping them to make the tough choices in a rational, consistent manner. To that end, we should insist that analysis be separated from, not limited by, politics.

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