So far as I know, nobody has really worried about doing a cost-benefit analysis of the epidemic. That's probably a good thing. But it's worth asking what such an analysis would look like. In other words, what would be worth spending to reduce the death rate based on cold-hearted economics?

To get a rough idea of the amount, we need to start with some picture of what the world would look like without such an intervention. According to the CDC, its modeling shows expected mortality between 200,000 to 1.7 million people. The lower end is about 2.5 times the number of deaths from one of the worst flu years in the recent past. The upper end is about the same as the 1918 flu pandemic, adjusting for the tripling of U.S. population in the meantime.

That's assuming there are no major government interventions to halt spread. But that assumption is useful if we want to know the possible benefits of government intervention. We don't know the right figure within this range, but an average between 200,000 and 1.7 million seems like a plausible estimate. That's 850, 000 deaths.

Now let's assume we have an intervention that would cut the death rate in half, which would mean saving 425,000 lives in our middle-of-the-road scenario. What is it worth to save that number of lives? There's a well-developed economic methodology for answering questions like that.

To do cost-benefit analysis, regulatory agencies like EPA have to convert the benefits of lifesaving regulations into a monetary equivalent. In effect, people act on average as if they valued their lives at $\$ 9$ million. This number is extrapolated from studies of how people respond economically to smaller risks. Economists call this the value of a statistical life (VSL). Since people may not be fully informed about risks, or may not have free choices about whether to take risks, the $\$ 9$ million figure is arguably too low. But it's the number EPA economists use to attach a monetary value to the lives saved by a regulation.

Using the $\$ 9$ million figure, we can calculate the value of saving 425,000 lives. If you do a little arithmetic, it turns out that the benefit of cutting the number of deaths in half is $\$ 3,825,000,000,000$ or about $\$ 3.8$ trillion, which is $18 \%$ of 2019 U.S. GDP. So in economic terms, it would be worth spending up to $\$ 3.8$ trillion to save those lives.

Obviously, this analysis could be refined in various ways, including using more realistic measures of the benefits of various interventions. Calling this a "back of the envelope" calculation is an injustice to envelopes. It probably only suggests about the right order of magnitude.

Still, the bottom line is clear. If we can hold back the death rate by throwing more money at testing, medical treatment, and behavioral change, even the most steely-eyed accountant would say that's a good deal.

