Transcript for “How Does COVID-19 Compare?”

Video Description
In this lesson from the 2020 introductory graduate level course, Foundations for Public Health, Professor Sue J. Goldie asks students to consider how the estimated burden of disease attributable to COVID-19 might compare to other major public health challenges, here in the U.S. and internationally. Length of video is 7 minutes and 44 seconds. Watch the video on Vimeo.

Transcript

[MUSIC PLAYING]

Hi, everyone. Now that we have finished looking at the burden of disease and risk factors from a global perspective, let's go ahead and return to that question I initially asked you to ponder. And that is, what do you think and what do you anticipate will the burden of disease be due to COVID-19 relative to some of these other causes that you have heard about?

And why don't we take a look at that question just through the lens of the United States. So take a look down here. And I have listed the top 10 and the 12th cause of deaths in the United States. And so I'll just jot down that these are deaths, not DALYs.

And I want to remind you that I have color-coded them. And you remember this color code, I'm sure. And this is just reflecting in the United States that the majority of the disease burden when reflected as deaths is due to non-communicable diseases or chronic diseases, and a smaller percentage due to injuries or infectious disease and maternal child mortality.

So I've color coded this list. So you can just glance at that very low distribution of infectious disease. And you can see number 1 is heart disease, and 2 is cancer. And then down here, number 8, substance use, 9, unintentional injuries, 10, self-harm and violence, and, 12, transport injuries. Keep those in mind.

Now what are those burdens in terms of deaths look like if I would put actual numbers to them? So we'll take the most recently available data from the GBD in 2017, which was published in 2018. And then we conveniently uncover that data right here.

And these numbers are reflecting the numbers of deaths. So 900,000-plus deaths due to heart disease, 300,000-plus due to neurologic diseases, 153,000 due to diabetes and chronic kidney disease, substance abuse, 81,600. Now these numbers may differ slightly from what you see, let's say, from the CDC.
But they're approximately similar. They're just coming from two different data sources and two different methodologies. Big picture, quite similar.

So if I asked you to think about where COVID-19 will fall based on what we know now, what would you say? And you're going to need to make some type of estimate because, of course, we haven't experienced COVID-19 over an entire year. And these are annual estimates.

But based on what we know now, so I've conveniently prepared a snapshot of where we are in terms of deaths and cases given it is the second week of July, early in the second week, which is when I am taping this.

And let's go ahead and take a look. So here's COVID-19 in terms of deaths. We're at just shy of 120,000. So if you take a look here, these are annual numbers, we're talking about, at best, a position that looks like it's going to be in the top 5.

So just based on how things are going now, and if they wouldn't change much, we're talking about COVID-19 being among the top five leading causes of death in the United States. When we think about the burden, you're also thinking about the number of cases and the impact on quality of life. So we're going to be interested in the incidents or the cases.

And I'll flip this over so we can see where we are today. Sadly, I think this number is going to be much higher by the time you actually watch this video. But at the moment, we're at about 1.34 million.

So think about those cases. Some will be mild symptoms, some will be moderate, and some will be severe. But consider that to assume there's no quality of life impact would be assuming that all we're counting is the deaths. And that everything else is really equivalent to being healthy.

Now that's not the case. We just don't know enough information to be able to assess and measure and describe in a scientific way what that quality of life impact will be. But regardless-- a big impact.

Let's go ahead and look at it in another way. And what we're going to do is take a look at the data from a snapshot over four months. And we're going to average the mean number of cases of a select group of diseases and injuries in the United States for the representative four months that we have data on COVID and see how that compares.

So here we have a graph. Let me go ahead and put that right there. And let me just introduce you to the metrics on this graph. On the x-axis, we have thousands of deaths, so 50,000, 100,000, 150,000, 200,000. And this is again, deaths in the United States attributable to a range of diseases. And the data is based on a snapshot of four months, February to May, 2014 to 2018, and an average over those months.
So I've given you a hint as to where COVID falls. But let's ignore the obvious red bar here. And let's just mark what those other disease areas are.

So up here at the top is heart disease. No big surprise there. And the second one, as you might guess, is cancer. Those were the leading two.

Here is COVID-19, as I hinted. And take a look at the magnitude of these other burdens in the United States expressed as deaths. And you might be surprised to learn-- this is stroke-- COVID is outpacing stroke by a magnitude of nearly twofold.

This is Alzheimer's, diabetes, flu, and pneumonia in adults, transport injuries. And what do you think this is? Compared to that, COVID-19. I'll give you a hint, it's an infectious disease. HIV/AIDS.

So just based on a four-month snapshot, four month window, and we have not improved since the end of May, at the end of this four month snapshot. We are exceeding every major cause of disease in terms of death except for heart and all of cancers.

So pretty profound. One of the tough things about this particular moment in time and trying to contextualize this course is that the data is rapidly changing. Unfortunately, right now, these are a bad few weeks. We have exploding rates in different parts of the country.

So I'm not sure what the end of the summer will look like. But a challenge will be for you to revisit this question, but in real-time when you watch it as the data are unfolding.

So with that, we're going to sign off here. But I'm going to leave you with a couple of resources that I think are super useful in terms of looking at data in real-time. And I'll walk you through those really briefly in a four-minute snapshot. And I'm going to ask you to take advantage of those when you go ahead and look at these different videos from the burden of disease.

With that, I will talk to you all soon.

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