HOST: The issue of when to classify a death as a COVID-19 death and when not to has been a source of confusion at times for the general public. In Part Two of our discussion, Dr. Robert Anderson, the Chief of Mortality Statistics at NCHS, attempts to provide some clarity on some of these topics:

HOST: Now in cases where a person dies from another condition such as terminal cancer... endstage Alzheimer's... something like that... but the person might contract COVID near the end of their life - is it then strictly a judgment call as to what role COVID-19 actually played in the death?

ROBERT ANDERSON: There are certainly circumstances with the role of COVID-19 is not clear. And in such cases the certifier does have to make a judgment call based on his or her training and expertise. They have to sort out what the causal sequence leading to death was and whether COVID-19 started that sequence, whether it was just a contributing factor or whether it wasn't a factor at all. So they have it's kind of sort things out and it's not easy when you have somebody who has a terminal disease. I mean, essentially what they have to do is figure out: OK, what did this person die from? What caused them to die when they died? So, you know, let's say somebody had terminal cancer and they had six months to live. And then they got COVID-19, let's say at the three month mark. Then the certifier would have to decide: OK, well would this person have survived longer with the terminal cancer if it weren't for COVID-19, and if the answer is no then the terminal cancer could probably be reported as the cause of death. If the answer is yes, then COVID-19 could be reported as the cause of death. But ultimately it comes down to the best medical opinion of the certifier.

HOST: Another example that has confused people in the past: someone is in a car crash and maybe the victim had COVID or develops COVID, and people get confused - how can COVID be responsible for somebody who's been injured in a car crash? What will you tell folks who are confused about that?

ROBERT ANDERSON: Well it really depends on the circumstances. In cases where the death is clearly the result of trauma caused by the crash, whether the decedent had COVID-19 or not should be irrelevant. COVID-19 is not a factor in those cases. Now, in these cases it should not be counted as COVID-19 deaths - because the trauma caused the death, not any sort of viral infection that person might have had. However, we do know of cases where people have been hospitalized with serious but not life-threatening trauma from a car crash, who contracted COVID-19 in the hospital and then subsequently died as result of COVID-19. So in a case like that the crash and the trauma might be a contributing factor, but the underlying cause was COVID-19. So that was the primary cause of death because that's what caused them to die when they died - it wasn't the trauma. So it's complicated and it does depend on the circumstances.

HOST: Is there any follow-up analysis planned on these types of deaths to suggest whether COVID was really the cause or just happened to be present?

ROBERT ANDERSON: Following back on hundreds of thousands of cases that we that we have isn't really practical, but we have done some work to look at the causal sequences to see if these generally make sense, and in the overwhelming majority of deaths the certifiers are clearly

indicating that COVID-19 was the cause of death. And so these are cases where certifiers are saying that the death was from COVID-19. So instructions on death certificates in the guidance we provided make it clear that COVID-19 should be reported if it caused or contributed to death in some way. A positive COVID-19 test is not by itself a sufficient criteria to warrant reporting on the death certificate – the certifier has to indicate the role of COVID-19 as a cause or contributor. So to the extent instructions are followed we should only be counting deaths from COVID-19.

HOST: On the other side, you have - during the initial surge in COVID-19 deaths in the early spring of 2020 - there was also a surge in non-COVID-19 deaths from causes such as heart disease and other leading causes of death. Is that correct?

ROBERT ANDERSON: Yeah, as COVID-19 deaths were surging in the spring there was also at the same time a surge in deaths due to some cardiovascular diseases, to pneumonia and diabetes and also dementia. Those are the main conditions that surged at the same time. And it's possible that at least some of these deaths should have been attributed to COVID-19 but we're not.

HOST: Has there been any follow-up analysis of those non-COVID-19 deaths that conclude that there were even more COVID deaths than what the numbers say?

ROBERT ANDERSON: Yeah we've done some analysis of excess deaths during the pandemic and I think we're going to talk about that just a little bit later. In addition, there is some work underway to try to quantify any underreporting, but it's likely that we're going to need more complete data by cause of death before we can say anything more definitively. It's likely that you'll get under-reported COVID-19 deaths mixed with indirectly- related deaths and it's fairly complicated to separate the two.

MUSIC BRIDGE

HOST: Next week, in Part Three of our conversation with Dr. Robert Anderson, we'll discuss "excess deaths" during the pandemic as well as other topics.

This week, NCHS published a trend report comparing death rates from overdoses in urban and rural counties over the past two decades. The more recent data from 2019 show overdose death rates were higher in urban counties than in rural counties. However, in five states death rates were higher in rural counties. Those states were: California, Connecticut, North Carolina, Vermont, and Virginia.

On the same day, NCHS published its latest monthly provisional data on drug overdose deaths in the country, for the one-year period ending in August of 2020. The data show overdose deaths are nearly 27 percent higher during this period than they were during the same period a year ago.

On Thursday, NCHS reported that 37,595 Americans were killed in motor vehicle crashes in 2019. This number was included in a new report on trends in death rates from motor vehicle crashes. The report shows there has been a slight increase in death rates from motor vehicle crashes in recent years, after a sharp drop in the rates from 2006 to 2010. Death rates in the

highest risk group -15-24 year-old males - have dropped over time to the point where rates are lower than for males age 25 and over.

Finally, today NCHS released a new analysis on emergency department visits for pneumonia and influenza from the 2016-2018 National Hospital Ambulatory Medical Care Survey. The report shows ER visit rates for pneumonia and influenza were higher for younger children than older children, and were also higher for the non-Hispanic black population than for other race/ethnic groups.