

HOST: This week NCHS has released a new [report](#) looking at infant mortality trends in two distinct regions of the country: Appalachia and the Delta. Joining us is the lead author of that report, Anne Driscoll, of the Reproductive Statistics Branch at NCHS.

HOST: Why did you decide to focus on these regions of the country?

ANNE DRISCOLL: Well both of these regions, at least the names, people are familiar with and the general locations. And they have very distinct cultures and histories compared to other regions of the country. And in addition, both are historically disadvantaged but also very different in terms of their histories, their populations, their geography, their economies. And a key factor for doing the analysis was that there are official, congressionally-mandated definitions of which counties belong to each region, so that made it possible to be very precise in our definition of each region when we're doing the analysis itself.

HOST: When you say “Appalachia,” specifically what areas are you talking about?

ANNE DRISCOLL: So like I said Appalachia is an official region and Congress established the Appalachian Regional Commission in 1965. And it includes 420 counties in 12 states - it runs from southern and western New York state, all the way down to northeastern Mississippi. It includes much of Pennsylvania, every single county in West Virginia, and parts of Virginia, North Carolina, South Carolina, Kentucky, Tennessee, Georgia and Alabama.

HOST: And so the same question goes for the Delta - what do you mean exactly when you say “the Delta region?”

ANNE DRISCOLL: Right, so it is also an official region and it was designated by Congress in 2000. It's a smaller area – it includes 252 counties spread across eight states, and it basically runs from southern Illinois, a few counties in southern Illinois, along the Mississippi River south and includes parts of Missouri, Kentucky, Tennessee, Arkansas, Mississippi, Alabama and Louisiana.

HOST: So before we go into the results of your new report, do we have any insight about why infant mortality rates have traditionally been so much higher in these parts of the country?

ANNE DRISCOLL: Both of these regions have been historically very rural -different kinds of rural but very rural - with high rates of poverty. Overall, there are lower levels of educational attainment, less access to decent paying jobs and other economic opportunities, less access to health care of all kinds. So generally there are worse outcomes - health outcomes - across a host of measures, not just infant mortality but including infant mortality. But also higher rates of disease and disability overall. such as heart disease, cancer, diabetes, obesity, an overall lower life expectancy. So usually all these health measures move in one direction or the other, so when you have poor health in general you're going to have in general an area that is going to have higher infant mortality.

HOST: So would access to prenatal care, for example, be an issue that might be contributing to that?

ANNE DRISCOLL: Right, and particularly in rural areas that are also poor areas. A lot of times it might be a long way to a, to drive to a doctor's office or a hospital, and lower income people might not have access to transportation to receive prenatal care. Rural hospitals often do not have the incomes they need to sustain themselves so you know some hospitals have gone out of business in rural areas in recent years. So yeah, so less access to actual health care while you're pregnant as well as all these other factors that come out of being in low-density populations and poor populations.

HOST: So your report shows that over the past couple decades rates are dropping fairly significantly in these regions. Do we have an understanding why that's happening?

ANNE DRISCOLL: That's a general trend in the United States in general that both regions have followed in terms of infant mortality. So yes, it's declined in the country in general, it's declined in Appalachia, it's declined in the Delta and in the parts of the country that are not either. And there are various other trends that have also affected the nation in general that affect infant mortality trends, such as lower teen birth rates... generally better treatment and care for at risk infants so for pre term infants we've gotten better at saving their lives over time as a society ...educational attainment has risen somewhat across the country and that is associated with better outcomes for infants... there's also been wider access to Medicaid for pregnant women in recent decades and that's allowed more to access prenatal care. One factor that we measured directly in this study was the decline in percentage of birth to teens. And so again infants of teens have a much higher risk of dying, and so when that percentage went down that affected the overall infant mortality rate and accounted for about a fifth of decline in mortality rates in our study. But that was true across all three regions - across Appalachia, across the Delta, and across the rest of the United States.

HOST: So the national rates are falling, but is there any indication that the disparity between the U.S. as a whole and these two regions are narrowing at all?

ANNE DRISCOLL: That is exactly the main question we wanted to address for this study. We know that these regions have lagged behind the rest of the country on a multitude of health measures. And we know that the infant mortality rates have gone down in these regions as they have in the rest of the United States. But that is exactly what we wanted to examine: whether the gap between either of these regions and the rest of the country has been, you know, closing or getting wider or staying the same. And our results support the conclusion that there has been some narrowing in the gap between the Delta and the rest of United States. In 1995 -96 which is the first year of our trend analysis, first years, the gap was 2.9 deaths per 1000 births - was that much higher in the Delta than the rest of United States. And by 2017-2018 that had gone on to 2.2. So another way to think of these numbers is that the gap between the Delta and the rest of the United States was about one quarter smaller in 2017-2018 then it was in 1995-96. And incidentally, when we track the trend line over that period, most of the decline in infant mortality rates in the Delta occur after 2004. So it was basically stable from 1995-96 through 2003-2004, and then started declining. But the gap between Appalachia and the rest of United States hasn't narrowed. The infant mortality rates in both regions have declined over the past twenty-some years, but they declined at about the same rate. So the gap between them didn't close and in both

our first year of analysis and our last year – 1995-96 and then 2017-2018 - the infant mortality rates in Appalachia were 0.9 deaths per 1000 births higher than the rest of the country. So during this time the gap between Appalachia and the rest of the country has been always been smaller than that between the Delta and the rest of the country, but it hasn't changed.

HOST: What about movement within the country? We've had the big growth in the "Sun Belt" that may include parts of these regions - a lot of people from the Northeast and Midwest have relocated. Has the role of migration to these areas played any part in reducing infant mortality?

ANNE DRISCOLL: Yes I mean it's true that we know that there's been this net migration from the northeast and the "Rust Belt" down to the South and the West. And this is not from our data but from Census data we know this, but if you look at the counties that encompass there that are parts of either the Appalachia or the Delta, this is not where most of the migration to those areas tends to go. It tends to go to more urban areas such as Charlotte or the Raleigh-Durham, the Research Triangle in North Carolina, or to Atlanta in Georgia. But much of the area that includes Appalachia and the Delta do not include large cities or have other economic opportunities that tend to draw new migrants from other regions of the country. So for instance Appalachia encompasses the Appalachian and the Great Smoky Mountain chains, where coal mining has been the main economic activity or a main economic activity, but there haven't been many robust economic areas that have attracted newcomers, so people are moving South but they're not moving to that part of the South and Southeast. The Delta is along the Mississippi Delta as I mentioned, but it includes mostly rural agriculture areas, and they've always suffered from lack of services and investment. So again in those States and regions people are not going to those parts of the South but to the bigger economic draws so we can't say directly but it doesn't appear that migration has played a role in changing infant mortality rates in these particular regions.