EconoFact Chats: Maternal Mortality, Race and Income

Petra Persson and Maya Rossin-Slater (Stanford University)

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I'm Michael Klein, executive editor of Econofact, a non-partisan, web-based publication of the Fletcher School at Tufts University. At Econofact, we bring key facts and incisive analysis to the national debate on economic and social policies, publishing work from leading economists across the country. You can learn more about us and see our work at www.econofact.org.

Michael Klein
The first episode of the HBO series Newsroom begins in a packed college auditorium in which the panelists are asked why America is the greatest country in the world. After insipid answers from two of the panelists, the news anchor Will McAvoy, played by Jeff Daniels, says that the premise of the question is wrong. He cites a range of statistics in which America is lagging, including being 49th in life expectancy and 178th in infant mortality. This makes for a dramatic moment, and McAvoy's outrage drives much of the plot in the first season of this series. But is his characterization of health statistics in the United States accurate? And if so, what explains these poor outcomes, in particular for maternal and infant mortality? To answer these questions, I'm very pleased to welcome to Econofact chats Petra Persson and Maya Rossin-Slater, both of whom are professors at Stanford University. Maya is in the Department of Health Policy. Petra is a professor in the Economics Department, and she is also an affiliated researcher at the Research Institute for Industrial Economics in Sweden. Petra and Maya, welcome to Econofact chats.

Petra Persson
Thank you so much.

Maya Rossin-Slater
Thank you.

Michael Klein
So let's start out with some basic facts. Was Will McAvoy right about life expectancy and infant mortality in the United States versus other countries? And if his rant had gone on longer, what could he have said about maternal mortality?

Maya Rossin-Slater
So this is Maya. Yes, I think at a big picture level, he was right in that the U.S. is an outlier when it comes to these health statistics, especially compared to other similar high-income countries. When it comes to maternal mortality, I also think he would have said that the U.S. does poorly as compared to other places. For example, our maternal mortality rate is two to three times higher that of comparable countries like Canada, France, or Sweden.

Michael Klein
What's been happening to maternal mortality in the United States and other countries over the last few decades? Petra?

Petra Persson
Yeah, so if we go back even more than a few decades, it's actually a really nice story. So since the beginning of the 20th century, maternal mortality has been declining a lot in the U.S. as well as around the world because of a range of things like healthier living conditions, better maternity services, safer surgical procedures, and access to antibiotics. Starting around 25 years ago, in the U.S., the maternal mortality rate began to rise, and we haven't seen a similar rise in maternal mortality over the past couple of decades in many other comparably wealthy countries. They have instead experienced roughly constant or falling maternal death rates. So in Sweden, for example, from 2000 to 2018, maternal mortality fell slightly from an already very low rate, from 4.4 to 4.3 deaths per 100,000 births. And in the United States, over the same time period, the maternal death rate since then rose substantially.

Michael Klein
And in fact, the rate in your research, you state it's like 17.4. So it's three or four times as big in the United States as in Sweden, right?

Petra Persson
That's right.

Michael Klein
So what are some possible explanations for this divergence between the United States and other countries, especially between the United States and other rich countries? Maya?

Maya Rossin-Slater
Yeah. So that's a really big question and it's a hard one to answer. I think a lot of different things come to mind. Of course, the different policy environments is a big one. So the U.S. is one of the few countries in the world that doesn't have paid maternity leave policy at a federal level. We don't have a universal healthcare system like many of the other countries that were mentioned. And just in general, there's much less policy surrounding new motherhood and new parenthood in the United States as compared to other places. So I think the policy environments is certainly one potential explanation.

Michael Klein
One thing that I've noticed is data on teenage birth rates. The teenage birth rate has been declining steadily since the mid 1990s, as far as I understand. And I guess I would expect that to contribute to the maternal mortality rate declining as well. Are the age or the income characteristics of mothers in the United States changing in a way that help explain increasing maternal mortality, or do these changes just deepen the puzzle?

Maya Rossin-Slater
Yeah, that's a good question. So it's true that the teen birth rate has been declining in the U.S. in particular. If anything, average age at birth is getting higher. So there's more women who are having their first children at older ages. And age is a known risk factor for various complications following childbirth and during pregnancy. And so that could at least in part explain some of these trends in maternal mortality.

Michael Klein
So when I teach, I'm sure when you teach as well, you make the point that averages help us make sense of large amounts of data, but they can also mask information. What do these averages, like 17.4 deaths per 100,000 births in the United States, what do these not tell us about the differences in health statistics across, say, rich and poor people, or across racial and ethnic groups?

Maya Rossin-Slater
Thanks. This is Maya again. So I think our averages mask a lot of really important information. So for example, in some of our work, we found large disparities in both infant and maternal mortality by income. So for example, comparing families at the very top of the income distribution in the top 10 or top 5% incomes, and comparing those at the bottom of the income distribution, we see gaps two to three times difference in both infant and maternal mortality rates, where richer women are much less likely to have children who die, and are much less likely to die themselves following childbirth.

Michael Klein
So if the average infant mortality rate in 2018 in the United States was 17.4 deaths per 100,000 births in the point that Maya just made, that it's higher for poor women than for rich women, that means that it must be a lot higher for poor women. Is that correct Petra?

Petra Persson
Yeah, that's exactly right. So as Maya mentioned, there's a threefold difference in these outcomes.

Michael Klein
So that's a huge difference by income. Are there also differences by race or ethnic group?

Petra Persson
Yeah, this is Petra. Yeah, so we also find that black mothers are substantially more likely to die from pregnancy-related complications than wealthier, you know, white or hispanic mothers. We find these really, really strong racial gradients that in fact swamp the income gradients.

Maya Rossin-Slater
Just if I may jump in here real quick, it's not just compared to the wealthier women, it's just that also the wealthy black women experience disproportionate burden of maternal mortality as well. So income is not protective for black women when it comes to complications and mortality.

Michael Klein
There's a terrific article in the New York Times in February that drew on your research. And what really struck me about that was that black mothers and black babies have worse outcomes even controlling for income. And these are obviously very disturbing statistics for a country as wealthy as the United States, especially since the numbers are moving in the wrong direction. A point is made in that same article that it's not race, it's racism that's happening. This was made by Professor Tiffany Green at University of Wisconsin in Madison. It's not the biology, it's the environment. Can you speak to some of the possible racism factors that are leading to these distinctions controlling for income between black mothers and babies and white mothers and babies?

Maya Rossin-Slater
This is Maya. So I think we now have growing amounts of evidence that racism can affect health outcomes through a myriad of ways. From experiencing discrimination or bias within the health care system, we've heard anecdotes, for example, about Serena Williams' experience with childbirth. These are real experiences that many black women have in our healthcare system. And our data suggests that that potentially could lead to adverse outcomes. But also outside the health care system. From disproportionate impacts of police brutality on black women's mental health, to environmental factors, to all kinds of ways in which racism permeates our society and can affect maternal and infant health.

Michael Klein
You've talked about how income matters and you've talked about how race matters as well. And we know that on average, black families are poorer than white families. Petra, how are you able in your research to separate out the effects of income and race, and thereby come to the conclusion that Maya was discussing, that things are worse for black women, even controlling for income?

Petra Persson
Yeah, that's a great question. The standard story in the US over the last 40 years has been that maternal health is worse, mostly when the mom is poorer. So we've been looking at racial disparities and a common interpretation has been that black mothers, for example, fare worse because they tend to be poorer. And in our data, we observe both income and race. So we're able to study the relationship between income and maternal mortality separately, by race. So that's how we see that at any level of income, black mothers have far worse health outcomes than their white counterparts at the same income levels. So for example, high income black mothers have the same risk of dying in the first year following childbirth as the poorest white mothers.

Michael Klein
As the poorest white mothers. That's very striking. What do you find for hispanic families, hispanic mothers and babies?

Maya Rossin-Slater

So I think hispanics tend to fall usually somewhere between the white and the black groups. Although sometimes it's kind of a bit more similar to white mothers. That's what we tend to find.

Michael Klein

And this is still controlling for income, correct?

Maya Rossin-Slater

Yes.

Michael Klein

So we have these racial disparities going beyond income disparities. What kind of policies could we see the government pursue in order to change these terrible outcomes for mothers? And are these policies shown to be effective in other countries?

Maya Rossin-Slater

Well, I think one thing that this points to is that if we want to improve outcomes, especially for black families in terms of infant maternal health, we can't only think about economic interventions. We can't purely think about resolving the gap between the rich and the poor as that's going to be the solution. We have to think beyond that, and think the ways in which various aspects of our society disproportionately affect people of color, and especially black families. In terms of specifics, I think some of the things I mentioned earlier, including paid parental leave, including better access to the healthcare system, including more specific things like, for example, nurse home visiting programs, which many other high-income countries have and we do not at sort of a systematic level, are probably going to be very helpful here. But again, I think all the policies need to really think critically about what to do about the racial disparities.

Michael Klein

Is there a special role for neonatal care as well?

Maya Rossin-Slater

So one thing that we did in our analysis is we looked at whether these gaps that we find in infant maternal health also exist within the same hospital. So looking, for example, in a hospital that has a high NICU level, and sort of has high quality neonatal care, do we still see these gaps? And the answer is, for the most part, yes. So certainly neonatal care is important and we think there's obviously improvements that could be made there as well. But it's not clear that the main driver of these inequalities that we find is differences in neonatal care. I think we have to think even bigger than that.

Petra Persson

Just to add to that, I think we should keep in mind that more than half of these maternal deaths occur after the birth of the baby, so in the postpartum period. So this really, I think, underscores the importance of policies that can improve conditions for new mothers after she's born, not just in the hospital.

Michael Klein

It's not just in the hospital, as you're saying, Petra, but it's a very wide range of things. Some very interesting research that you did has to do with company policies, not just government policies. Can you speak to that a little bit, please?

Petra Persson

Yeah, so this is Petra again. So Maya and I, we jointly did a study where we looked at a policy change that took place in Sweden. So Sweden, for background, is one of these countries with a very generous parental leave system, so mothers and fathers can take approximately 15 months of paid leave after the birth of the child. But most of this leave must be taken by either the mother or the father, and they cannot be taken, the parents cannot take leave at the same time. And similar rules actually exist in many other rich countries. And we study a policy change that relaxed these rules, so it allowed parents to take leave at the same time. And this meant, sort of effectively, the law allowed fathers to take up to 30 days of paid leave on an intermittent basis while the moms were still on leave. And we find that this policy change that puts dads in the home together with the mother after the birth of the child; that resulted in some clear benefits for the mother's health, including reductions in child related complications, and reductions in postpartum anxiety.

Michael Klein

So what recommendations would the two of you make, say you were in front of a congressional committee, to help resolve some of these issues, both for poor versus rich, for black versus white, but more generally, the United States just has a very poor record on this.

Petra Persson

Yeah, that's a great and very big question. This is Petra again, let me sort of start. I think getting back to this fact that more than half of these maternal deaths occur in the postpartum period, after the birth of the baby, I think means that we really need to think about policies that can help mothers, new mothers in this postpartum period. Now, expanding insurance coverage so that women are covered by health insurance would be one important step. And in particular, ensuring that women have regular care, not during pregnancy, but also after giving birth. So the reality today is that many vulnerable women in the US are lacking health insurance in the postpartum period. Even women who were offered Medicaid during pregnancy often lose it 60 days after childbirth. So we essentially have many women uninsured during this critical time after childbirth. Now, the second policy that comes to mind is that the US is the only high income country that does not guarantee any paid family leave to mothers after childbirth. And we know from work that, for example, Maya has done, shown that paid family leave for mothers, it boosts infant health but we also know that it's important for mothers in the postpartum period. And then

of course, there's paternity leave, which our joint work has shown can have a direct impact on maternal health as well.

Michael Klein
Maya, do you have any further suggestions?

Maya Rossin-Slater
Yeah, so I completely agree with what Petra's mentioned. I think there's a host of policies sort of centered around this family period that are really critical, including postpartum coverage, including paid parental leave, including things like nursing home visiting that I mentioned earlier. But I think at a high level, we also have to zoom out a little bit and realize that the way that people come into pregnancy and new parenthood is also a function of how healthy they were, you know, even before they conceived. So this idea of pre-conception health. And to that point, I mean, I think any policies that you can think of that improve, you know, child health, that improve adolescent health, and improve like young people's health in this country are actually quite important in terms of preparing them for when they do become parents and the health that they enter that period with. So I have this sort of idea that yes, the US lags on family policy, we know that, you know, we need to care about that. But I think focusing only on the family period actually misses this component that some of this actually is determined before people, you know, become pregnant, before they become parents. And we, you know, we lack there as well.

Michael Klein
So would you say that these issues of maternal and infant mortality are in a way a canary in the coal mine in referring back to the way I began this episode with these statistics about how the United States lags behind. This is sort of one indicator of the poor health statistics for the United States as a whole. And perhaps it's the most dire and most shocking in some ways. But it is a statistic that points to a lot of other things that are going on as well. Would you agree with that?

Maya Rossin-Slater
I would. I would.

Michael Klein
So let me conclude by just saying, going back to that first episode of Newsroom, when Will McAvoy is deciding whether or not to answer the question, saying the United States isn't the greatest country in the world, he looks up in the audience and there's somebody holding a sign who says, and the sign says 'it isn't', and that convinces him to start his rant. But the person also turns a sign around and it says, 'but it could be.' And I think if people listen to researchers like the two of you more for these issues, that would really help make the United States realize its potential along these very important dimensions.

So thank you very much for joining me today and talking about this incredibly important issue.

Petra Persson

Thank you

Maya Rossin-Slater

Thank you so much for having us.

Michael Klein

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