

Income affects maternal and infant health in some unexpected ways, study finds

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While higher income improves maternal and infant health over time, it's not enough to offset the impact of race, according to new University of Michigan research.

In addition, although higher-income mothers and their babies ultimately end up with better health outcomes, they start with more difficulties. And regardless of wealth, maternal and infant health in the United States lags behind Sweden.

The new findings are part of a research project conducted by Sarah Miller, associate professor of business economics and public policy at the Ross School of Business, and colleagues. The researchers combined California health records with IRS data to provide one of the first in-depth explorations of the effect of income on maternal and [infant health](#).

"There have been a lot of papers and analysis showing that if you compare the U.S. to other [wealthy countries](#), we do quite poorly in terms of infant and maternal health," said Miller. "And there's a lot more inequality, particularly race-based, in the U.S. than in other countries.

"Income is potentially a really important factor in this, but it's been hard to nail that down because birth certificate data doesn't have any information on [family income](#). What we're bringing to the table is this new dataset, which links birth certificates to income data so we can actually see how rich families' kids and moms are doing compared to those of poor families and how that interacts with other disparities like race."

Since income tends to improve most measures of health, the researchers expected to find higher incomes would lead to lower rates of infant mortality. That turned out to be true, but some other findings were more unexpected.

Wealthiest families start out at a disadvantage, but it doesn't last

One key finding that surprised the researchers: Although families in the lowest income bracket had some problems with preterm births and low birth weights, families in the highest income bracket did even worse on these measures.

"That was driven almost entirely by maternal age and multiple births," Miller said. "Higher-income women were having their first birth at an older age, or those that had their first births at an older age were higher income. And the fact that they had more multiple births suggests maybe there was some fertility assistance that was responsible.

"The thing we found really interesting was that although we found much higher rates of preterm and low birth weights among the very wealthiest families, they also had the very lowest infant mortality. So even though babies were being born with these very high risk factors at very high rates, they were also the most protected."

Race trumps income on maternal and infant health

Past research has shown a strong relationship between race and the health of mothers and babies, Miller said. For example, non-Hispanic Black infants tend to have more health issues than non-Hispanic white infants.

The researchers wondered if this would disappear among the very richest families, who theoretically would have the same access to top health care. Yet the study found racial gaps persist.

"When you look at the highest-income Black families, their infants'

health is on average worse than the very poorest white families," Miller said. "And the same is true for maternal health."

Miller said the research can't pinpoint a reason. Discrimination and unequal treatment is a possibility, or it may be more a matter of systemic issues—babies born with health problems may go on to become mothers themselves, continuing a cycle of challenges.

California lags Sweden, regardless of income

The researchers also compared the California data to similar data from Sweden. Since the U.S. tends to perform worse on most health measures than other wealthy countries, they expected to see that—but again, they thought the highest-income families in the U.S. might close the gap. That was not the case.

"It was quite striking," Miller said. "We're not saying why these patterns exist; we're just documenting them. But it did suggest to us that Sweden has universal [health](#) insurance starting from birth, they have paid family leave, they have better access to medical care throughout the parents' life. This could be part of the reason why even [wealthy people](#) in California are not doing as well as poor people in Sweden."

Implications for improvement

Miller said one key point of the research was that efforts to improve infant and [maternal health](#) in the U.S. should not focus only on low-income families; the racial factors must be addressed.

On the positive side, the turnaround in outcomes for the wealthiest families—having the most low birth-weights and more preterm births yet the lowest infant mortality—demonstrates the power of interventions available in the U.S.

"We have this incredible technology in the U.S. We're ranked No. 1 by the World Health Organization for advanced neonatal technologies, and we have some of the best pediatric hospitals," Miller said. "If we could just extend this protective intervention to a wider range of people on the income distribution, we might be able to really improve infant mortality, which would be great. Maybe we could do better for everyone."

More information: Kate Kennedy-Moulton et al, Maternal and Infant Health Inequality: New Evidence from Linked Administrative Data (2022). [DOI: 10.3386/w30693](https://doi.org/10.3386/w30693)

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