

7. What are the three categories of discrimination (describe/define) mentioned in the article and how might they affect health outcomes?

8. What effect might social support programs and policies, like food stamps and minimum wage, have on health outcomes?

What's Killing America's Black Infants?

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After she lost her son, Tonda Thompson dreamed of a baby in a washing machine. She'd stuffed in dirty clothes and closed the door. The lock clicked shut. Water rushed in. Then she saw him, floating behind the glass. Frantic, she jabbed at a keypad on the machine, searching for a code to unlock the door.

When Thompson became pregnant she was 25, living in Los Angeles and working as a model. She and her boyfriend got engaged and moved back to Milwaukee, Wisconsin. She'd grown up on the city's north side, a predominantly African-American neighborhood with pockets of deep poverty, in a zip code known for having the highest incarceration rate in the United States. Thompson went to all of her medical appointments, took prenatal vitamins, and stayed in shape. On her birthday, she wrote on Facebook that the only gift she wanted was "a healthy mom and baby." But she also wrote about how hard it was to be pregnant in a city where there was "nothing to do that's fun and safe."

Thompson got married in April 2013, and a month later went into labor. Forty hours later, Terrell was born. He lived less than half that time, due to "complications" with the delivery. By the time Thompson got home, all of the baby's things had been moved to the basement. She'd gotten to hold him for five minutes.

Thompson sank into a depression. She thought about suicide. On her birthday, she received divorce papers; by the next summer, she was on the verge of homelessness. She often felt angry that the hospital didn't save her son. But mostly she asked herself, "What did I do wrong?"

Each year in the United States, more than 23,000 infants die before reaching their first birthday. Though the mortality rate varies widely by state and county, the average in the United States is higher than in the rest of the world's wealthy countries, worse than in Poland and Slovakia. Because infants are so vulnerable, their survival is considered a benchmark for a society's overall health. What our infant-mortality rate tells us is that, despite spending more money on health care than any other country in the world, the United States is not very healthy. Looked at closely, it reveals that particular groups of Americans are starkly unwell.

White, educated American women lose their infants at rates similar to mothers in America's peer countries. Most of the burden of the higher mortality rate here is borne by poorer, less-educated families, particularly those headed by unmarried or black women. Across the United States, black infants die at a rate that's more than twice as high as that of white infants. The disparity is acute in a number of booming urban areas, from San Francisco—where black mothers are more than six times as likely to lose infants as white mothers—to Washington, DC. In the capital's Ward 8, which is the poorest in the city and over 93 percent black, the infant-mortality rate is 10 times what it is in the affluent, predominantly white Ward 3.

The year that Terrell died, a mother in war-torn Libya had better odds of celebrating her child's first birthday than Thompson did. Milwaukee has one of the worst infant-mortality rates of all major

urban centers in the United States, and the racial gap is threefold. (Four other Rust Belt cities count among the 10 with the highest rates of infant death: Cleveland, Detroit, Indianapolis, and Columbus.) Over the past decade, more than 100 babies, at least 60 of them black, have died in Milwaukee each year, about two-thirds of them because they were born early or small.

Bevan Baker, Milwaukee's commissioner of health, is one of the people trying to reverse the trend. "If 100 people died from tuberculosis, then you would have a whole different approach," Baker said. "People would say we have a public-health emergency." His department, working with a coalition of groups, is trying to respond with the same urgency that it would to a deadly infectious disease. The city has declared infant mortality to be a primary health priority and, in 2011, set a goal of reducing the overall rate by 10 percent, and the black rate by 15 percent, by the end of this year.

For many years, researchers have asked the same question that Thompson asked herself: What are black mothers doing wrong? Common answers included eating poorly; being overweight or diabetic; smoking or drinking during pregnancy; not going to the doctor; not being married; getting pregnant too young; or smothering their newborns in their sleep. In the 1980s, health officials began focusing on access to prenatal care as a way to reduce these perceived risk factors. The result, said Dr. Michael Lu, an ob-gyn and leading infant-mortality researcher, was more women getting care, but little improvement in birth outcomes. Instead, the racial gap grew. Black women who received prenatal care starting in the first trimester were still losing children at higher rates than white women who never saw a doctor during their pregnancies.

By the late 1990s, the field was at a crossroads. Lu said, "We'd dedicated the last two decades to trying to improve on access to prenatal care, but if prenatal care is not the answer, then what?" Some researchers suggested that black women were genetically predisposed to poor birth outcomes, and began to hunt for "preterm birth genes." At the time, pharmaceutical companies were exploring race-specific drugs, and the public-health community was embroiled in a broader debate about whether race is a genetic category. That debate hasn't fully died out. But we now know that genetic variation among humans is tiny and doesn't correspond neatly with racial categories. If preterm birth genes did exist, we would expect to see poor outcomes for black women everywhere, but studies have found that foreign-born black women living in the United States have birth outcomes almost identical to white American women's.

Other researchers suggested that poverty and lack of education were to blame, as black women consistently experience higher poverty levels. Those factors matter, but they don't account for the full racial gap. After evaluating 46 different factors, alone and in combination—including smoking, employment status, and education—the authors of one 1997 study could account for less than 10 percent of the variation in birth weight between black and white babies. Another study found that even black women with advanced degrees—doctors, lawyers, MBAs—were more likely to lose infants than white women who hadn't graduated from high school.

Now, a growing body of evidence points to racial discrimination, rather than race itself, as the dominant factor in explaining why so many black babies are dying. The research suggests that what happens outside a woman's body—not just during the nine months of pregnancy—can profoundly affect the biology within. One study found that black women living in poorer neighborhoods were more likely to have low-birth-weight infants regardless of their own socioeconomic status. More segregated cities have greater black/white infant-mortality disparities; women whose babies are born severely underweight are more likely to report experiences of discrimination. This may help to explain how someone like Tonda Thompson, who says she did everything right during her pregnancy, could come to bury her infant son.

Early one morning last September, a Milwaukee Health Department nurse named JoAnn went to the city's north side to check on 9-month-old TJ and his mother, Ebony. Ebony participates in one of the department's four home-visiting programs, which are a key component of the city's strategy to reduce infant deaths. Similar intensive home-visiting programs in other cities have been shown to be effective. In a study conducted in Cincinnati, babies who received home visits were more than twice as likely to survive as those who didn't.

Ebony lives in a corner apartment above her church, in the same neighborhood where Tonda Thompson was raised. Ebony grew up in Chicago, but when she was a teenager, her mother sent her to live with her father in Milwaukee, to get her away from violence. Back then, she remembers, Milwaukee was safe enough for her to sleep on the porch when it got too hot inside. Now, she's reluctant even to take TJ out, because she thinks the city has gotten too dangerous. "Milwaukee has [gone] from beautiful to garbage," Ebony said. Even the inside of her apartment isn't totally safe. Around the time Ebony got pregnant, an electrical fire forced her to move temporarily into a Red Cross shelter. Now she worries about lead paint on the windowsills and puts blankets down on the floor before she lets TJ crawl around on the old carpet. "I just want a house, where my baby can play in a yard, but, you know—where?" she said.

Ebony's impression of decline is real, although Milwaukee has always been hostile to its black population. During the 1940s and '50s, the manufacturing boom created high-paying jobs, and the city flourished. But African Americans came more slowly to Milwaukee than other Midwestern cities, in part because the labor force was already filled by European immigrants. In the 1920s, the Milwaukee Real Estate Board had begun to steer black renters and home buyers to a small area northwest of downtown. By 1940, according to the sociologist Juliet Saltman, all of the city's 8,821 black residents lived in a three-by-four-block area. The City Council repeatedly rejected a fair-housing ordinance, passing it only after Congress passed the Fair Housing Act in 1968.

The city's black population began to grow in the 1960s. But as Alec MacGillis recounted in a 2014 article in *The New Republic*, there was little time for the city's black community to build wealth before the local economy collapsed. Between 1961 and 2001, the city of Milwaukee lost 69 percent of its manufacturing jobs. In 2007, the city got walloped again by the housing crisis, which wiped out much of the black wealth the city had. Milwaukee was one of the cities hardest hit by the real-estate crash, with 40 percent of its homes—nearly half of those in Ebony's neighborhood—underwater as of 2014.

More than a decade ago, Ebony had a daughter. She lived for eight months. Just before she died, Ebony bathed her and put her in a swing. She went to check on the chicken she was cooking and came back to find her daughter unconscious. The official cause of death was sudden-infant-death syndrome. SIDS, one of the leading causes of infant death in the United States, still mystifies researchers. But what happened to Ebony's daughter is part of a broader trend that defines America's high infant-mortality rate: Where the United States really lags is in keeping babies alive after they've left the hospital, when they're between 1 month and 1 year old.

After her daughter died, Ebony was in an abusive relationship and had several miscarriages. She assumed she'd never have another child. "I didn't want to bring any kids into this world or this time," she said as she laid TJ across her lap to change his diaper. "But God said otherwise, and of course I'm going to accept my blessing."

Ebony has had high blood pressure since she was 11, and when she was pregnant with TJ, she developed preeclampsia. He was born on Christmas Eve, several weeks early. For the next couple of months, JoAnn visited every week to check on his health and set parenting goals with Ebony. TJ grew quickly, and JoAnn's encouragement showed Ebony that she was on the right track. "Every time she'd weigh or measure him, she'd say, 'Oh, he gained a pound or two!'" Ebony said. "The fact that he was progressing made me real happy."

Parenting is difficult under the best of circumstances, but Ebony and women living in other poor, segregated neighborhoods face a particularly brutal slate of risk factors and stressors—having to move during pregnancy, for instance. Harvard sociologist Matthew Desmond found that 30 percent of the people evicted in Milwaukee each year are women living in black neighborhoods, though they make up less than 10 percent of the city's population. Then there's the fact that Wisconsin locks up more of its black men than any other state in the country, leaving more women to parent alone, or with partners whose criminal record makes it difficult for them to get a job.

Chronic stress raises amounts of cortisone, a hormone that at elevated levels triggers labor. It can also cause an inflammatory response that restricts blood flow to the placenta, stunting infant growth. But it's not just stress during pregnancy that matters: Health experts now think that stress throughout the span of a woman's life can prompt biological changes that affect the health of her future children. Stress can disrupt immune, vascular, metabolic, and endocrine systems, and cause cells to age more quickly.

All of these effects together create what scientists call "allostatic load," or "the cumulative wear and tear on the body's systems owing to repeated adaptation to stressors," according to a 2006 study published by Arline Geronimus and others in the *American Journal of Public Health*. Geronimus, a University of Michigan professor, developed what she calls the "weathering" hypothesis, which posits that black Americans' health deteriorates more rapidly than other groups' because they bear a heavier allostatic load. "These effects may be felt particularly by Black women because of 'double jeopardy' (gender *and* racial discrimination)," Geronimus and her co-authors noted. (Infant mortality is just one of many forms of disease that fall disproportionately on black Americans. The list includes cervical cancer, asthma, diabetes, and cardiovascular disease.)

Researchers now link much of that higher stress burden to racial discrimination. Dr. Camara Phyllis Jones, president of the American Public Health Association, proposed a now widely cited framework for understanding how discrimination affects health outcomes, breaking it down into three categories: internalized, personally mediated, and institutionalized. Personally mediated experiences include things like being treated differently at a doctor's office than white patients; black women who report these kinds of experiences have been found more likely to have low-birth-weight babies. But institutional discrimination—which refers to the ways in which unequal treatment has been baked into our social, economic, and political systems—impacts individual health too. It's apparent in the disparities in the criminal-justice system, in education, in predatory lending practices that target African Americans, and in the siting of polluting industrial facilities near communities of color. These problems are particularly acute in most of the cities with large racial gaps in their infant mortality rates. In none of America's peer countries is racism so embedded—and that may explain why racial gaps in infant mortality and other health outcomes are worse here. These various forms of discrimination, stacked up over a lifetime, can cause chronic stress, which in turn can damage the biological systems necessary for a healthy pregnancy and birth.

Institutional racism is like a thicket of thorny plants: After a woman spends a few decades walking through it, it can be hard to tell which particular prick led to her child's death, or if it was all of them together. But there's growing recognition that a woman's entire life experience matters, maybe even her parents'. "We literally embody, biologically, the societal and ecological conditions in which we grow up and develop and live," said Dr. Nancy Krieger, a professor of social epidemiology at Harvard University. "Infant mortality is affected by not only the immediate conditions in which the infant is conceived and born, but also the health status of the mother and, some evidence indicates, the father as well." In 2013, Krieger and her colleagues compared infant deaths in states with and without Jim Crow laws; they found that black infant deaths were significantly higher in Jim Crow states, but that after the passage of the 1964 Civil Rights Act, the gap shrank and, by 1970, had disappeared (although the overall black/white gap persisted). The study suggests that discriminatory policy does indeed shape health outcomes. If this is true, then the infant-mortality gap can't be closed without addressing broader inequities in employment, education, health care, criminal justice, and the built environment—in other words, without ending racial discrimination altogether.

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Community leaders working to reduce infant mortality in Milwaukee understand the complexity of their task. Operating alongside the Milwaukee Health Department's home-visiting program is a community partnership, the Milwaukee Lifecourse Initiative, led by the United Way of Greater Milwaukee and Waukesha County. "If you look tangibly at where you can intervene, it seems easier, quite frankly, to say, 'OK, we just need to make sure more people have primary-care providers; we need to make sure women take folic acid,' than it is to fix racism and poverty," said Nicole Angresano, a vice president at the United Way. "It's critical that we think more broadly. It's also really daunting."

The Lifecourse Initiative targets three zip codes on the city's north side, including the neighborhood where Tonda Thompson grew up and where Ebony lives. Part of the plan focuses on fatherhood.

Unlike earlier “responsible fatherhood” initiatives, which emphasized child-support enforcement, the program focuses on systemic problems, which means connecting men to jobs—a higher percentage of African Americans are unemployed in Milwaukee than in any other US city—or keeping an expectant father who’s been caught up in the criminal-justice system in contact with his family. Other programs involve faith leaders. Community gardens at several churches prioritize mothers in an attempt to compensate for the lack of fresh produce available in the inner city. Several dozen churches have been designated “safe-baby sanctuaries,” places where families can come for education and resources like diapers.

At one of those places, Ebenezer Church of God in Christ, I met Julia Means, a nurse with a striking track record with Milwaukee’s infants. By her own count, Means has worked with 360 families in the last 12 years, through a program called Blanket of Love. Every single baby whose parents came to her group meetings lived to its first birthday, she told me. Her method is to “wrap the pregnant woman up in love.” Sometimes that’s meant finding a home for them, and furniture to fill it; or role-playing, to help them feel confident speaking to doctors; or educating them on safe sleeping conditions; or, in a few cases, helping women escape abusive partners in the middle of the night. Another way to put it is that she does what she can to reduce the stress in these women’s lives.

In its efforts to reduce infant deaths, Milwaukee has made mistakes: A few years ago, the city launched an ad campaign focused on safe sleep featuring graphic images—one showed a baby in bed with a butcher knife, with the message “Your baby sleeping with you can be just as dangerous.” An alderwoman pushed to criminalize parents whose babies died after sleeping with them if the parents had been intoxicated. Means said the campaign “set the community on fire”; it struck her as harsh and racially motivated. She warns against unsafe sleep arrangements in her own program, but because they account for only a small percentage of infant deaths, she said it made little sense for the city to direct its resources to the issue. Milwaukee Mayor Tom Barrett told me that initially he’d seen safe sleep as “low-hanging fruit,” only to realize later that it came across as scolding black women.

Barrett, who is notably engaged in the effort to lower infant mortality, pointed out that the general trend in the city is positive: Fewer babies of all races are dying in Milwaukee each year. But because the outcomes are improving more quickly for white infants, the racial disparity is growing. It’s all but certain that the city will miss its goal of a 15 percent reduction in the black infant-mortality rate this year. The state’s Republican leadership has only made things more difficult by cutting social support programs like food stamps. Last year, the state stripped hundreds of thousands of dollars in funding from Milwaukee’s home-visiting program. Wisconsin Republicans have also fought efforts to increase the minimum wage, which could have a positive effect on the infant-mortality rate. A study released last year found that a \$1 increase in the minimum wage in various states between 1980 and 2011 corresponded with a 1 to 2 percent decrease in low birth weight and a 4 percent decline in deaths of infants between 1 month and 1 year.

The new buildings rising in Milwaukee’s prosperous lakeside neighborhoods stand in stark contrast with the grinding poverty on the city’s north and west sides. When I spoke with Barrett, he argued that city leaders were doing what they could to spread the benefits of that growth—for instance, by requiring construction projects that receive public funding to hire local workers. But the sheer scale

of the segregation and inequality makes that kind of effort look like tinkering at the margins. The same is true on a national level. For several decades now, neither political party has applied much urgency to the task of dismantling the major drivers of racial disparity—housing and school segregation, for instance—head-on. Several social-support programs have been effective in bringing down infant-mortality rates and the black/white gap in other cities; their major flaw is one of scale. Barrett acknowledged that home visits won't be able to reach every family who needs them. As Means told me, not everyone wants city officials coming to their homes. But when I pressed the mayor on whether the city government could do more to address segregation and poverty, he threw his hands up in exasperation and shook his head. “Welcome to America,” he said.

After Terrell died, Tonda Thompson remembers, people assured her that she'd have another child, as if he were replaceable. “People tend to blow it off like it's nothing,” she said. “But when a black family loses a baby, it can destroy every bit of that family.”

Thompson did piece herself back together again. She took the dream about the baby in the washing machine as a sign—she had to help Milwaukee crack the code. In 2015, Thompson accepted an AmeriCorps position to work with the United Way on infant mortality. Later, she got a job working for a city alderwoman. She is also expecting a child, and plans to name him Jehlani, a Swahili name meaning strong and mighty.

Thompson told me that although the city has good intentions, people in her community still aren't getting what they need: The segregation isn't changing, the incarceration rates aren't coming down, and people she knows don't trust the medical community. A few weeks before we met, a police officer shot and killed a 23-year-old black man named Sylville Smith, triggering several nights of protests. There are “too many black babies dying, too many black men dying,” Thompson said. The horizon seems particularly bleak for young women who get pregnant. “We do have a stigma of ‘She's not married; she messed up; she's young—she ain't going to be nothing.’ And that attitude gets into her mind and goes to the baby.”

Infant mortality is a wicked problem. It requires us to think about health less as a matter of biology and more as the result of political choices and socioeconomic realities. It has no single solution. But “the point is not to frame complexity as daunting,” said Nancy Krieger, the Harvard epidemiologist, “but actually as opening many avenues for effective action, and asking how different groups that are already engaged can understand how their issues relate to infant mortality.”

Bevan Baker, the health commissioner, described Milwaukee's infant-mortality work as an opportunity to reckon with what is perhaps America's most profoundly destructive legacy. “When you look at the racial disparity, it forces us as citizens and residents of this great nation to deal with the incomprehensible notion that race matters,” he said. “That's something that Milwaukee, Wisconsin, and every other state will have to come to grips with.”