

# New initiative improved care for sepsis patients, but black patients saw smaller benefits

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The New York Sepsis Initiative was launched in 2014 with the goal of improving the prompt identification and treatment of sepsis. A new study has found that while the program has improved care over all, there were racial and ethnic disparities in the implementation of the best-practice protocols.

Sepsis is a life-threatening condition that occurs when the body's extreme response to an infection triggers a chain reaction, said Dr. Mitchell Levy, a professor of medicine and chief of the division of Pulmonary, Critical Care and Sleep Medicine at Brown University's Warren Alpert Medical School. "Even with the best care, the mortality rate is between 15 and 25 percent."

Early identification and treatment of sepsis is essential for saving lives, and the multi-stage best practices for sepsis identification and treatment were codified in the New York Sepsis Initiative's protocols. The new research, published Monday, July 1 in the July issue of the journal *Health Affairs*, found that during the first 27 months of the initiative, the percent of patients who received the complete 3-hour-long, best-practice protocol increased from 60.7 percent to 72.1 percent. At the same time, the in-[hospital mortality rates](#) for sepsis patients decreased from 25.4 percent to 21.3 percent, which aligned with prior research by Levy, who is also the medical director of the Medical Intensive Care Unit at Rhode Island Hospital.

However, the paper highlights a disparity in sepsis care between black and [white patients](#).

Specifically, during the first 27 months of the initiative, black patients only experienced an increase of 5.3 percentage points in the completion of the best-practice protocol, while white patients experienced an increase of 14 percentage points. Hispanic and Asian patients experienced an increase of 6.7 and 8.4 percentage points respectively.

Being aware of these disparities is critical because the Centers for Medicare and Medicaid Services is considering trying sepsis protocol completion rates to hospital reimbursement, said Dr. Amal Trivedi, senior author on the paper and a professor at Brown's School of Public Health and medical school. "If our study findings extend beyond New York, it raises concerns about the possibility of these quality improvement initiatives for sepsis exacerbating [racial disparities](#) in care."

The researchers found that hospitals that serve higher proportions of black patients had smaller improvements in protocol completion. Within the same hospital, white and [black patients](#) received similar care, in terms of protocol completion rates, Trivedi said.

Prior research found that minority-serving hospitals tend to have more financial stress, fewer resources and less infrastructure to devote toward quality improvement measures, which is likely the reason why minority-serving hospitals had smaller improvements in sepsis [protocol](#) completion, Trivedi said. These hospitals also tend to treat more uninsured patients and those on Medicaid.

After adjusting for risks, such as type of infection, age and other chronic health conditions, the team did not find a statistically significant change in hospital mortality rates between racial and ethnic groups, despite the

disparities in care delivery. During the first three months of the initiative, 25.8 percent of white sepsis patients and 25.4 percent of black sepsis patients died while in the hospital. Two years into the initiative, 21.3 percent of white sepsis patients and 23.1 percent of black sepsis patients died while in the [hospital](#).

"Our work highlights the need for state and federal policy makers to anticipate and monitor the effects that quality improvement projects, such as the New York State Sepsis Initiative, have on racial and ethnic minority groups," said Dr. Keith Corl, first author on the paper and an assistant professor of medicine in the division of Pulmonary, Critical Care and Sleep Medicine at Warren Alpert Medical School. "Racial and ethnic minority groups can get left behind. Knowing this, it is our job to better design and monitor these programs to ensure racial and ethnic minority patients realize the same benefits as white [patients](#)."

Trivedi added that in order to improve health equity, policymakers may need to devote additional funding to under-resourced hospitals that experience challenges in improving [sepsis](#) care so that their performances can match that of other hospitals.

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