

New research identifies key reasons racial disparities exist in emergent stroke treatment

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African-Americans are less likely than whites to receive critical stroke treatment primarily because they do not get to a hospital soon enough for time-sensitive treatment and because of preexisting medical conditions. For patients who are eligible for treatment, no racial disparity was found.

Those are the findings of a new Georgetown University Medical Center study involving the review of almost 1,000 [patient records](#) from all seven acute care hospitals in Washington, DC. The new study will be published in the June 30th issue of American Stroke Association's *Stroke*.

"Our study probably can be generalized to other urban communities in the US," says Chelsea Kidwell, MD, director of the Georgetown University Stroke Center. "The good news is that the results of the study provide important information on how to improve stroke treatment care in African-Americans in the future," she says.

The researchers looked at whether patients received the best drug possible to treat the most common type of stroke, called [ischemic stroke](#). This type of stroke is caused by a blood clot that blocks blood flow in the brain. The drug tPA, or [tissue plasminogen activator](#), is designed to break up the clot, which can reduce the effects of a stroke and reduce permanent disability. tPA is administered intravenously at a hospital and must be given within a few hours after the patient's initial symptoms. Previous studies, however, have suggested that blacks are less likely than whites to receive tPA. Researchers set out to determine if the disparity existed in the District of Columbia and if so, what the reasons might be.

For the study, Kidwell and her colleagues reviewed 973 records from patients hospitalized with ischemic stroke at all seven Washington, DC acute care hospitals. Of the patients, 80 percent were black, and 20 percent were non-Hispanic white.

"In Washington, a predominantly black urban population, we found that blacks were a third less likely to be treated with tPA than whites," explains Kidwell. She says understanding the reasons for this disparity are critical for making change in the future.

Researchers found that blacks were more likely to arrive at a hospital after the narrow treatment window during which tPA must be administered to be effective. Even if they arrived within three hours of symptom onset, blacks were still half as likely to be treated with tPA than whites.

"A key reason why fewer blacks received tPA appears to a greater rate of pre-existing medical conditions such as uncontrolled hypertension, recent stroke or being on blood thinners," Kidwell explains. "These conditions make tPA administration unsafe."

Uncontrolled hypertension accounted for nine percent of the patients who didn't receive tPA. An additional 10 percent had a recent [stroke](#) or evidence of a prior hemorrhage.

After accounting for the differences, the researchers found that of the [tPA](#) eligible patients, the treatment rate for blacks and whites was actually similar.

"Our study not only demonstrates that there is a racial disparity in acute [stroke treatment](#) rates in this predominantly African-American urban population, but identifies two important underlying reasons: African-Americans do not get to the hospital early enough for treatment and they

have a greater number of medical reasons for not receiving treatment," says Kidwell.

"Interventions designed to increase treatment in this population need to focus on culturally relevant education programs designed to address barriers specific to this population," she says.

Provided by Georgetown University Medical Center

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