Report links Chicagoans' distance from trauma centers to higher mortality rates

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By: Natalie Moore: WBEZ

Chicago-area gunshot victims who are shot more than five miles from a trauma center have a higher mortality rate, according to a new public health study released on Thursday.

Dr. Marie Crandall, a professor in surgery/trauma care at Northwestern University, analyzed 11,744 gunshot patients from 1999-2009. The data found 4,782 people were shot more than five miles from a trauma center. Those patients were disproportionately black and less likely to be insured.

“We have demonstrated that incident proximity to a trauma center has a positive effect on survival outcomes for gunshot wound victims,” says Crandall’s report, which the American Journal of Public Health published. Trauma centers take care of more severe injuries such as stabbings, car crashes and gunshot wounds (GSW). The Chicago area has seven Level 1 adult trauma centers.

Among the study’s findings: The crude mortality rate for blacks shot within five miles is 6.42 percent; whereas outside of five miles, it is 8.73 percent. This would translate into 6.3 excess deaths per year. Crude mortality is not adjusted for variables such as severity of injury. Crandall said previous research had shown difference in transport times but didn’t really affect survival. This new research drills down to Chicago and focuses solely on gunshot wounds.

“Our study is different. The heterogeneity of trauma patients are such that if you’re not specific about your research question, you might find different results,” Crandall said. “The vast majority of penetrating trauma in the city of Chicago is gunshot wounds and very relevant to our current crises, we decided to limit the data set and analysis to that population.”

According to the study, “We have identified the southeast side of the city as a relative trauma desert in Chicago’s regional trauma system that is associated with increased GSW mortality. We hope that the data presented will inform discussions aimed at optimizing regional trauma care in Chicago and will also aid in planning regional trauma systems in other urban settings.”

In 2011, a WBEZ analysis suggested that when it came to ambulance run times from the scene to trauma centers, there were disparities. Put simply, patients living on the Southeast Side face longer ambulance run times than other residents in the city. Specifically, they have to travel an average of 50 percent longer to get from the scene of an emergency to a trauma center. More than half of the trauma-related ambulance runs that originate in that part of town exceed 20 minutes, which is considered a professional standard within the city. Those neighborhoods include Hyde Park, Woodlawn, Pullman, South Shore and the Southeast Side.

Trauma center access has long been a contentious issue for some activists. And there have been questions about whether an additional trauma center would save lives on the South Side.

In 2010, a stray bullet killed youth activist Damian Turner. He was shot on the South Side, near the University of Chicago hospital. But he was transported approximately eight miles downtown to an adult trauma center at Northwestern University. Ninety minutes later he died.

A group called Fearless Leading by the Youth believes if the university had its own trauma center, Turner would have gotten treatment sooner and lived. For years, members have protested the University of Chicago, which had a trauma center for adults from 1986-1988. It closed after hemorrhaging $2 million a year, though they still serve children. At the time doctors said a majority of patients had no health insurance. Recently the issue flared up again when the University of Chicago opened a new $700 million facility with no additional trauma care.

Victoria Crider, a member of FLY, says the new study will help activists’ cause.

“We plan on using this data to show that this is exactly what it says: a relationship between whether or not you live or die and the time it takes you to get to the nearest trauma center,” Crider said.

The study acknowledges the costliness of trauma centers. Crandall writes that trauma centers could be rebalanced on the basis of volume and proximity as opposed to capacity. In addition, she writes that existing local hospitals could take in trauma patients in a possible Level 2 capacity.

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