

## Being near a liquor store or tavern in Chicago hikes odds of gunshot wound

September 20 2013, by Marla Paul

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A person near a liquor store or tavern on the West Side or South Side of Chicago is up to 500 times more likely to be shot than others in these neighborhoods.

That's the dramatic new finding from a Northwestern Medicine study that examined the association between proximity to a [liquor store](#) or tavern in Chicago and gunshot wounds from 1999 to 2009. The study offers the first view of the precise association in specific [neighborhoods](#), not just the overall city.

The results could be reflective of a similar association in other distressed neighborhoods in large cities, investigators said.

"It makes sense," said lead investigator Marie Crandall, M.D., associate professor of surgery at Northwestern University Feinberg School of Medicine and a physician at Northwestern Memorial Hospital.

"You're adding alcohol to an already volatile situation in a distressed community," Crandall said. "If you light a match in the rainforest and throw it on the ground, the match will go out. If you light a match in a haystack in the middle of a drought, a powder keg will go off. These neighborhoods are powder kegs because they are challenged with high rates of unemployment, faltering economies, loss of jobs and institutionalized poverty and racism."

A solution could be closing liquor stores in certain areas or replacing

liquor stores with food stores, Crandall suggested.

The study authors controlled for other variables that might increase the likelihood of a gunshot wound: a higher proportion of young males, the number of male heads of households, [educational status](#) and racial demographics that make a community more vulnerable to violence.

The study was presented Sept. 18 at the 2013 Annual Meeting of The American Association for the Surgery of Trauma. Crandall's research focuses on disparities in [trauma care](#) in the U.S. and Chicago.

Several prior studies about the association between liquor purveyors and shootings have yielded mixed results in other cities because those studies examined the effect on the city as a whole. The Northwestern study used geographic regression analysis and U.S. Census data to provide a precise view of the association in specific neighborhoods. Most Chicago neighborhoods were unaffected except the communities on the West Side and South Side.

The Northwestern investigators examined each census tract in the city and the number of packaged liquor stores and taverns. They then controlled for all the variables associated with gunshot wounds in each neighborhood as well as the incidence of [gunshot wounds](#) in the area further away from liquor purveyors.

"We saw this incredible association between liquor stores and shootings in our most distressed communities," Crandall said. "You are 20 to 500 times more likely to be shot if you are in proximity to a liquor store, in particular, or a tavern. In some neighborhoods, the association is higher than others."

Crandall said the findings should be used to initiate discussions with city officials and the public health department to explore the possibility of a

pilot investigation analyzing the cost of closing liquor stores in certain areas versus the benefit of decreasing gun violence. She also suggested studying the possibility of changing a business license from liquor store to food store in these Chicago neighborhoods.

Provided by Northwestern University

Citation: Being near a liquor store or tavern in Chicago hikes odds of gunshot wound (2013, September 20) retrieved 27 April 2024 from <https://medicalxpress.com/news/2013-09-liquor-tavern-chicago-hikes-odds.html>

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