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## More Alcohol Sales Sites Mean More Neighborhood Violence, New Research Finds

ScienceDaily (Feb. 22, 2010) — More alcohol sales sites in a neighborhood equates to more violence, and the highest assault rates are associated with carry-out sites selling alcohol for off-premise consumption, according to new research released Feb. 21 by two Indiana University professors.

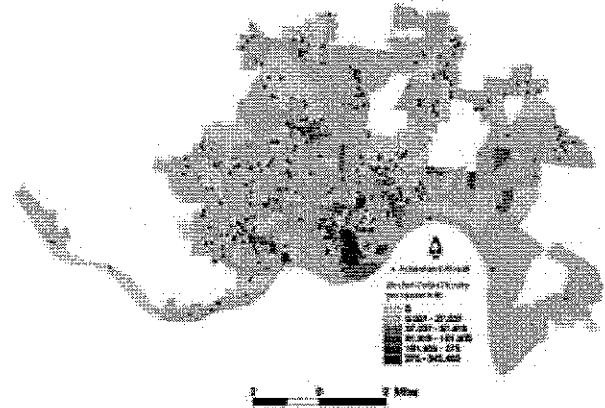
Using crime statistics and alcohol outlet licensing data from Cincinnati, Ohio, to examine the spatial relationship between alcohol outlet density and assault density, Department of Criminal Justice professor William Alex Pridemore and Department of Geography professor Tony Grubestic found that off-premise outlets appeared to be responsible for about one in four simple assaults and one in three aggravated assaults.

The findings were released at a press briefing entitled "Using Geographic Information Systems and Spatial Analysis to Better Understand Patterns and Causes of Violence" and presented as part of the Feb. 18-22 annual meeting of the American Association for the Advancement of Science in San Diego, Calif.

"A higher density of alcohol sales outlets in an area means closer proximity and easier availability to an intoxicating substance for residents," Pridemore said. "Perhaps just as importantly, alcohol outlets provide a greater number of potentially deviant places. Convenience stores licensed to sell alcohol may be especially troublesome in this regard, as they often serve not only as sources of alcohol but also as local gathering places with little formal social control."

Using different suites of spatial regression models, the researchers found that adding one off-premise alcohol sales site per square mile would create 2.3 more simple assaults and 0.6 more aggravated assaults per square mile. Increases in violence associated with restaurants and bars were smaller but still statistically significant, with 1.15 more simple assaults created when adding one restaurant per square mile, and 1.35 more simple assaults per square mile by adding one bar.

"We could expect a reduction of about one-quarter in simple assaults and nearly one-third in aggravated assaults in our sample of Cincinnati block groups were alcohol outlets removed entirely," Grubestic noted. "These represent substantial reductions and clearly reveal the impact of alcohol outlet density on



*Aggravated Assault and Alcohol Density in Cincinnati, Ohio: Jan.-June 2008. Indiana University professors Tony Grubestic and William Pridemore generated a geospatial display of aggravated assaults co-mingled with color-coded districts denoting alcohol outlet density for Cincinnati, Ohio. (Credit: Pridemore, W. A. and T. H. Grubestic (2010))*

assault density in our sample."

The study examined 302 geographic block groups that encompassed all of Cincinnati, with each block group containing about 1,000 residents. Block groups are subdivisions of census tracts and represent the smallest unit available for socioeconomic analysis using data from the Census Bureau.

Crime statistics from January through June 2008 provided by the Cincinnati Police Department found 2,298 simple assaults and another 479 serious assaults had occurred in the study area during that time. The location of each of these criminal events was geocoded to show the precise location where they occurred. The researchers, using data from the Ohio Division of Liquor Control for Hamilton County, Ohio, then used the same geocoding techniques to spatially aggregate the city's 683 unique alcohol sales outlets into those block groups. The arithmetic mean, or average, density of assaults was 69 per square mile, while the average density of alcohol outlets per square mile was 20.

The researchers pointed to possible implications from the research on both public policy and on future research within the field of criminology. Pridemore said ecological studies of alcohol and violence similar to this one, while appearing more and more over the past 20 years in journals of disciplines like public health, geography and epidemiology, have been rare in criminology journals.

"We believe that alcohol outlets, as a source of community-level variation in levels of interpersonal violence, deserve greater attention in the criminological literature," he said. "The nature of our findings should encourage further investigation of the nature of the ecological association between alcohol, violence and other negative outcomes within communities."

Grubestic said explanations for crime ecological theories like collective efficacy, social disorganization and social cohesion rely on elements like poverty, ethnic heterogeneity, residential mobility, anonymity of community members and willingness to intervene on another's behalf, are difficult to remedy through public policy. That is not the case with alcohol outlet density, he said.

"Alcohol outlet density, on the other hand, is much more amenable to policy changes," Grubestic pointed out. "Unlike other negative neighborhood characteristics that often seem intractable, regulating the density of outlets, and to some extent their management, can be readily addressed with a mixture of policies by liquor licensing boards, the police and government agencies that regulate land use."

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