

Simulation model finds Cure Violence program and targeted policing curb urban violence

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Small investment in Cure Violence combined with a 40 percent increase in the police force over 10 years led to reductions in violence that were equivalent to reductions when quadrupling the investment in hot-spots policing or doubling the investment in Cure Violence alone over the same period. Credit: UC Davis Health



When communities and police work together to deter urban violence, they can achieve better outcomes with fewer resources than when each works in isolation, a simulation model created by researchers at the UC Davis Violence Prevention Research Program, Columbia University's Mailman School of Public Health and the University at Albany has found.

The study, which published online and appears in the January 2018 issue of the journal *Epidemiology*, is the first to estimate the relative impact of two leading approaches to prevent <u>violence</u>: targeted policing, whereby police increase patrols in neighborhood violent hot spots, and a community-based strategy known as <u>Cure Violence</u>, which uses "interrupters" and outreach workers to work with the friends and families of victims to identify, mediate and prevent further violence and retaliation.

The research provides insights into the potential effectiveness of criminal justice and public health approaches to violence prevention, and the degree of <u>investment</u> that may be needed to decrease population-level rates of violence.

"Violence is a persistent public health problem in the U.S.," said Magdalena Cerdá, associate professor of emergency medicine and associate director of the Violence Prevention Research Program at UC Davis. "Sizeable investments in targeted policing, specifically in small areas where a majority of crimes occur, have reduced crime. However, communities nationwide have expressed concerns about police abuse and racial bias and are looking for alternative approaches to preventing violence, which rely less on punishment."

The current study focused on identifying the best approaches to prevent urban violence. The research model used an artificial population that resembled the New York City population and were placed in a grid that



resembled New York City neighborhoods. Behaviors and parameters were drawn from city data sources and published estimates. Their goal was to assess the relative impact of targeted policing versus investment in Cure Violence on population-level rates of violent victimization.

The team simulated three types of interventions in the most violent neighborhoods: investing in more targeted policing, implementing Cure Violence, and combining investment in targeted policing and Cure Violence.

"We found investment in Cure Violence could actually achieve the same reduction in victimization as did a much larger investment in targeted policing," said Katherine Keyes, associate professor of epidemiology at Columbia University. "More importantly however, we also found that a smaller investment in both Cure Violence and targeted policing together could achieve a larger reduction in victimization compared to what either intervention could achieve alone."

The population the researchers created mirrored the adult population of NYC, and the behaviors and experiences reflected expected distributions of violence and homicide. One of the critical drivers of the program effectiveness in the Cure Violence model, the authors write, was the addition of more violence interrupters into the intervention neighborhoods.

"Our work suggests that effective strategies to prevent urban violence must involve collaboration across multiple sectors, including <u>public</u> <u>health</u> and criminal justice," said Melissa Tracy, assistant professor of epidemiology at the University at Albany. "We can do more together than if we take an isolated approach."

The researchers used a simplified version of hot-spots policing focused on intervention in violent events vs. all types of hot-spots policing



models. They also had perpetrators find victims primarily based on spatial proximity, rather than including other important aspects such as the relationship between victim and perpetrator. The Cure Violence component also did not incorporate a change in social norms component related to violence, which may underestimate the impact that the community based intervention could have. Due to the lack of data available, the model also did not incorporate gang structures into the model, and as a result, it featured a simple social network structure that did not change over time. Other limitations include the model's specificity to NYC and not including data on the potential costs associated with each programs.

More information: Magdalena Cerdá et al, Reducing Urban Violence, *Epidemiology* (2017). DOI: 10.1097/EDE.00000000000756

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