

# Gun violence can be reduced by clearing vacant lots, study finds

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Researchers from Penn and Columbia identified a drop in crime rates in neighborhoods surrounding trash-strewn vacant lots that were transformed into mini parks. This lot at the corner of N. 7th and West Boston Streets was not part of the study but underwent the same treatment.

As the United States once again debates how to combat gun violence, criminologists say they have had trouble determining which measures will actually work.

That is partly due to congressional restrictions on research funding passed under pressure from gun-rights advocates such as the National Rifle Association. Also there are so many guns in the U.S. that certain efforts, if they work at all, do little to move the needle.

But a new Philadelphia study, financed by the National Institutes of Health, finds evidence for a gun-violence remedy few would argue with: clearing trash and debris from vacant lots.

Researchers selected 541 blighted parcels to receive one of three treatments from the Pennsylvania Horticultural Society: a full-scale makeover with grading, planting, and fencing; a basic intervention with just clearing and mowing; and no treatment at all. When study authors analyzed crime rates in the areas surrounding these lots for 18 months before and after treatment, they found that both kinds of “greening” appeared to reduce gun assaults, burglaries, and overall crime.

The biggest decrease was seen in the rate of shootings in neighborhoods where the median income was below the poverty line. When compared to the areas surrounding untreated lots, gun assaults dropped by 17.4 percent near lots that received the full makeover and by 29.1 percent near lots that got any kind of greening — either the full treatment or basic clearing and mowing.

If the city were to clear all of its blighted lots — a total currently close to 30,000 — the researchers estimated that the number of fatal and nonfatal shootings could go down by as much as 350 each year. In 2016, there were 1,279 shootings in Philadelphia.

Study authors said greening vacant lots would not prevent mass shootings such as the Parkland, Fla., slaying of 17 teens and adults on Feb. 14. But it could reduce the day-to-day urban gun violence that accounts for the bulk of U.S. homicides, said lead author Charles C. Branas, chair of the epidemiology department at Columbia University’s Mailman School of Public Health.

“We have an area the size of Switzerland in our cities that’s been abandoned like this,” said Branas, also an adjunct professor at the University of Pennsylvania. “This is an opportunity for the U.S.”

Branas, his colleagues, and others have previously studied the potential of green space as a crime-prevention tool. But the new study, published Monday in *Proceedings of the National Academy of Sciences*, was unusual in its scope, said Medical College of Wisconsin researchers Sandra Bogar and Kirsten M. Beyer. The two were not involved in the new study but reviewed research on the topic in 2015.

“The implications of this study are particularly exciting because they can support the generalizability of findings across both large spaces and diverse urban populations,” Bogar and Beyer said in an email.

What’s more, the decline in crime near the greened land parcels was not accompanied by a corresponding increase in nearby neighborhoods, said Penn criminology professor John M. MacDonald, who worked with Branas on the study.

“It was a strong sign that it was not just getting pushed a few blocks away,” MacDonald said.



**Pennsylvania Horticultural Society**

A before-and-after look at the lot at N. 7th and West Boston Streets. Researchers say clearing and maintaining such lots can reduce the crime rate.

The study authors, who included researchers from the University of California Los Angeles, Rutgers University, and the U.S. Forest Service, randomly selected which plots of land would get the green treatment. The goal was to eliminate bias and to ensure that any drop in crime was indeed linked to the greening and not some other factor.

“This is the same procedure that the Food and Drug Administration requires before it’ll approve a drug for market,” Branas said.

Another plus: the intervention is inexpensive, as the Horticultural Society has been doing similar work on a large scale for more than a decade, primarily funded through the city Division of Housing and Community Development.

The full makeover described in the study required an initial cost of about \$5 per square meter and just 50 cents per square meter each year after for maintenance, authors said.

The Horticultural Society program, called LandCare, is currently maintaining about 12,000 cleared parcels, said society president Matt Rader. At least 1,200 other parcels were cleaned through the program but are no longer part of it because they were redeveloped.

The broader goal of LandCare is urban revitalization, not specifically crime prevention, but its overseers welcome that benefit. Another goal is jobs. The full makeover was undertaken by contractors, most of them minority-owned, and the basic clearing and mowing of other lots was supervised by nonprofit partners who hired neighborhood residents. Each year LandCare also trains and hires several dozen former prison inmates.

“We’re trying to figure out how to apply horticulture and greening to address as many needs as exist in Philadelphia’s neighborhoods,” Rader said.

In a 2011 study of green space and crime, Branas and MacDonald hypothesized that clearing vacant lots reduced gun violence because there were fewer old couches and other debris under which drug dealers could hide guns.

But for the new study, several of the researchers lived for months in two communities — Point Breeze and West Kensington — interviewing residents and observing the impact of lot-clearing. It turns out guns are too valuable to be hidden in vacant lots, and that drug dealers hide them instead in the trunk or behind a hidden panel of a car parked *in front of* a vacant lot, said UCLA anthropologist Philippe Bourgois, one of the study authors.

Once a lot was cleared, residents began to use it and felt empowered to shoo away criminals — and their cars.

“What we think is that it made people invested in that space,” Bourgois said. “People got hope.”

The lot-clearing was not universally popular in Point Breeze, where economic development has given rise to fears that long-term, lower-income residents will be pushed out. But residents were all for the lot-clearing in Kensington, Bourgois said.

“The lots were no longer no-go zones,” he said. “It basically gave people the courage to start hanging out.”