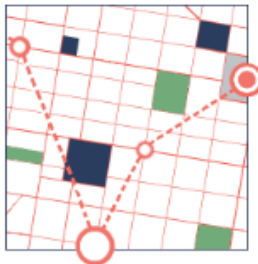


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# Place-Based Experiments to Remediate Blighted Vacant Land and Reduce Shootings

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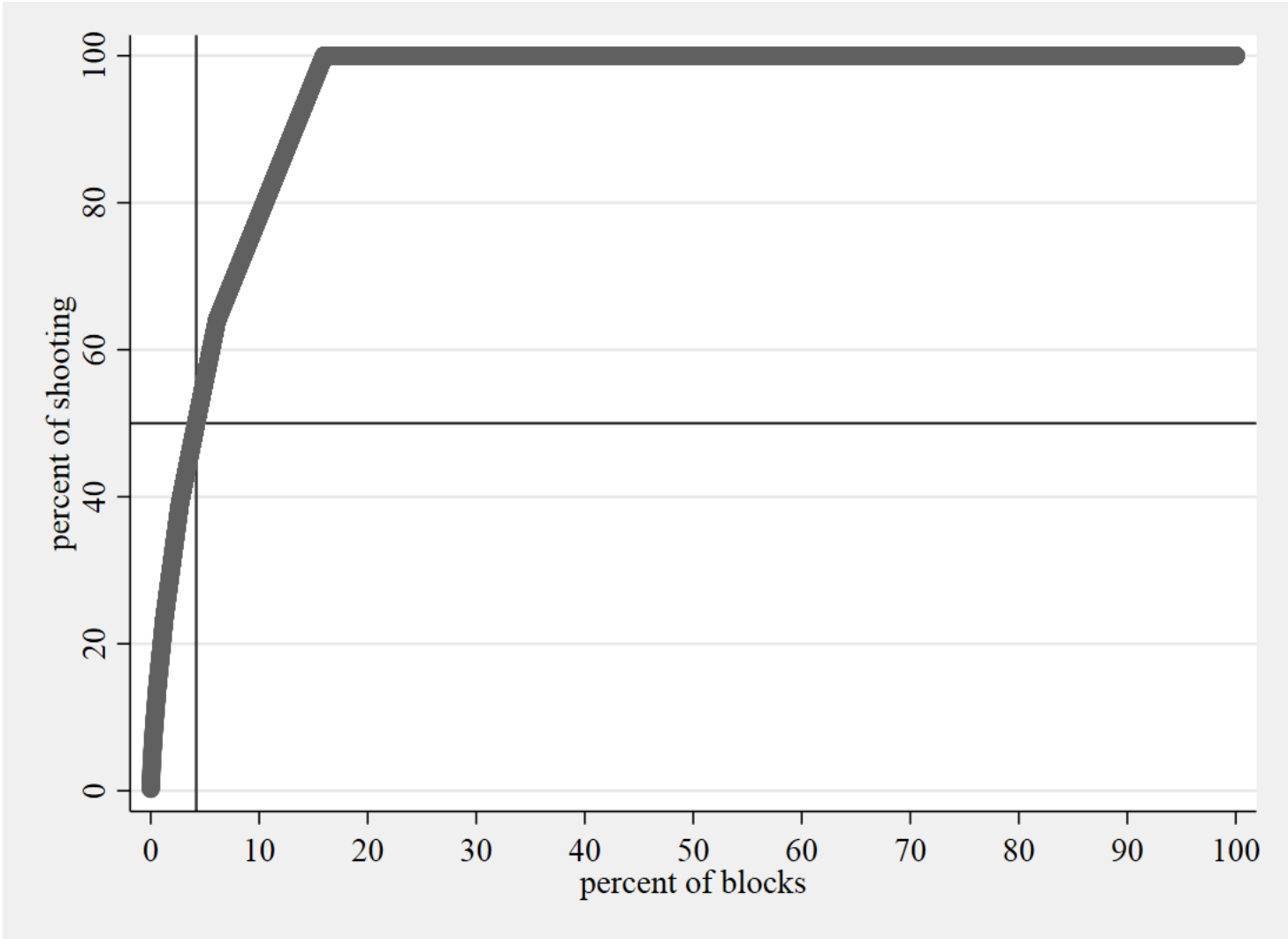
UNIVERSITY *of* PENNSYLVANIA  
**INJURY SCIENCE**  
Center

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## **A small number of places in every major city generate the majority of serious crime**

- **In Philadelphia 4.2% of blocks between 2015 and 2018 accounted for 50% of all reported shootings in the city**
- **Similar results have been shown in Boston, Chicago, New York, and St. Louis**

# Shootings by Blocks in Philadelphia, 2015-2018



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***Given this concentration of gun violence, it makes sense to think about what features of places we can change to curb these pockets of violence that exist in every major city.***

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# Features of places consistent with pockets of crime include:

**concentrated poverty;**

**dilapidated homes;**

**and vacant and abandoned properties.**

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**Cities should implement programs to abate vacant and abandoned spaces and address proximal causes for why gun violence concentrates in these spaces.**

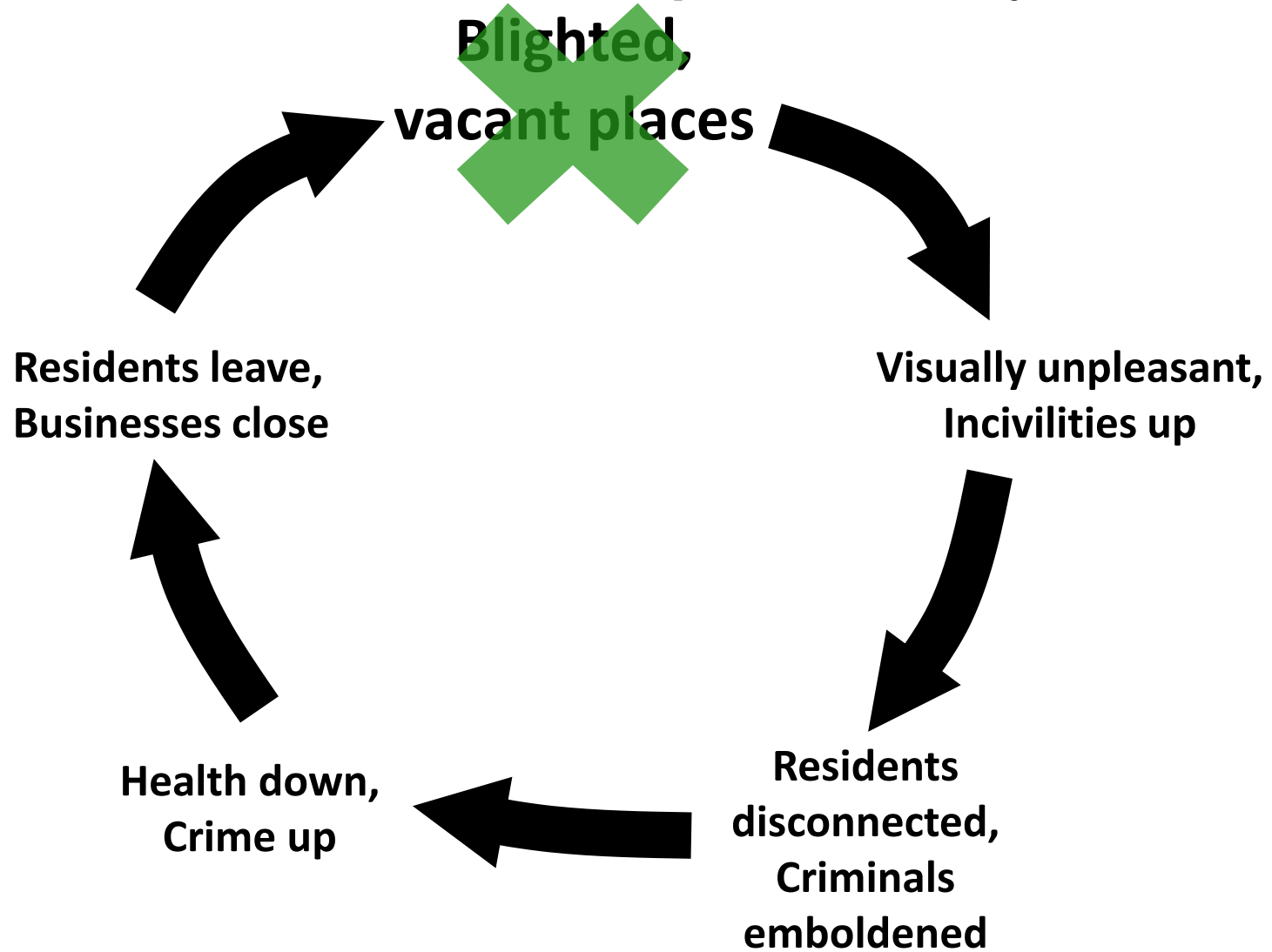
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***The theory of action connects to crime prevention through environmental design, situational crime prevention, and broken windows***

- **Overgrown shrubs, weeds, and trees on abandoned properties and vacant lots reduce the visibility of criminal activities on the streets**
- **Visible signs of disorder signal that “no one cares” and that community norms around civility are no longer obligatory**
- **Physical signs of disorder like trash on the streets, abandoned property, and unkempt properties spread fear, further abandonment, and signal to criminals that crime goes unabated**

# *Disorder and the Spiral of Decay*

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## Crime and community health prevention requires more than reacting to problems

- *Just as physicians now recognize the importance of fostering health rather than simply treating illness, so the police—**and the rest of us**—ought to recognize the importance of maintaining, intact, communities without broken windows (Wilson, James Q., and George L. Kelling. "Broken windows." Atlantic Monthly 249, no. 3 (1982): 29-38).*

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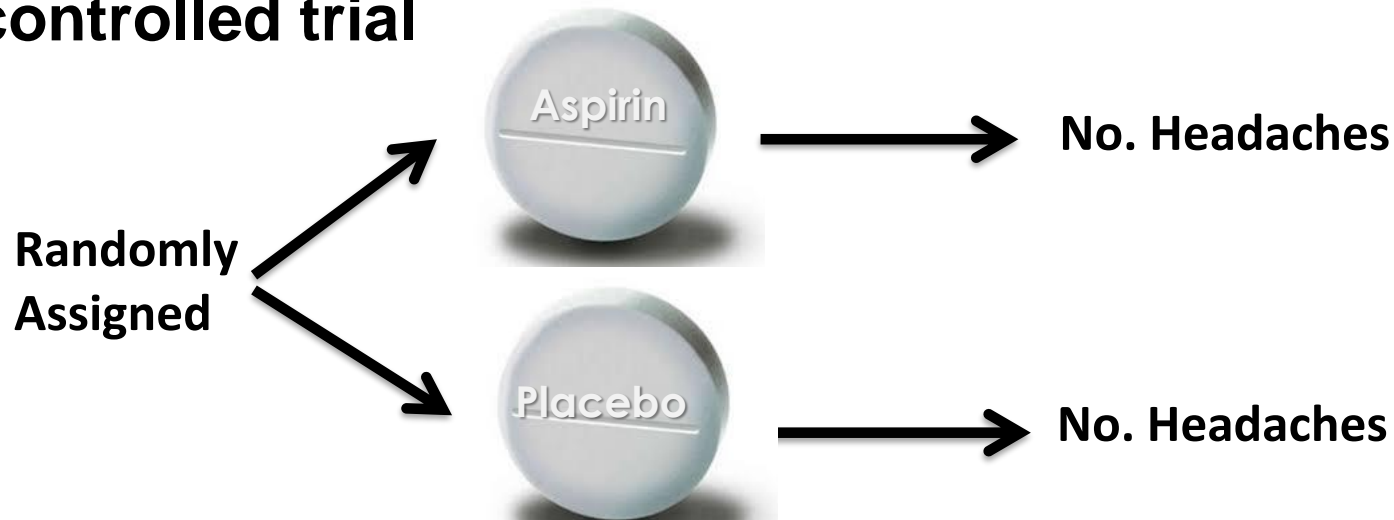
# **The benefits of prioritizing the remediation of vacant land**

- 1. Fixing blight and abandonment is straightforward**
- 2. Programs can be scaled to entire populations**
- 3. Remediation can be designed in ways that are not expensive to maintain**

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**Increasing evidence from scientific studies provide examples of successful programs that cities can replicate and allow residents to stay in their neighborhoods, reduce gun violence, and prevent the spiral of decay**

# The best scientific evidence in the field: randomized controlled trial



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# **Pennsylvania Horticultural Society (PHS) LandCare Program**

**Started as pilot project with a neighborhood association in 1996**

**Vacant lot treatments: remove trash and debris, grade the land, plant grass and trees to create a park-like setting, install low wooden post-and-rail fence**

# Relatively Simple and Noticeable Results

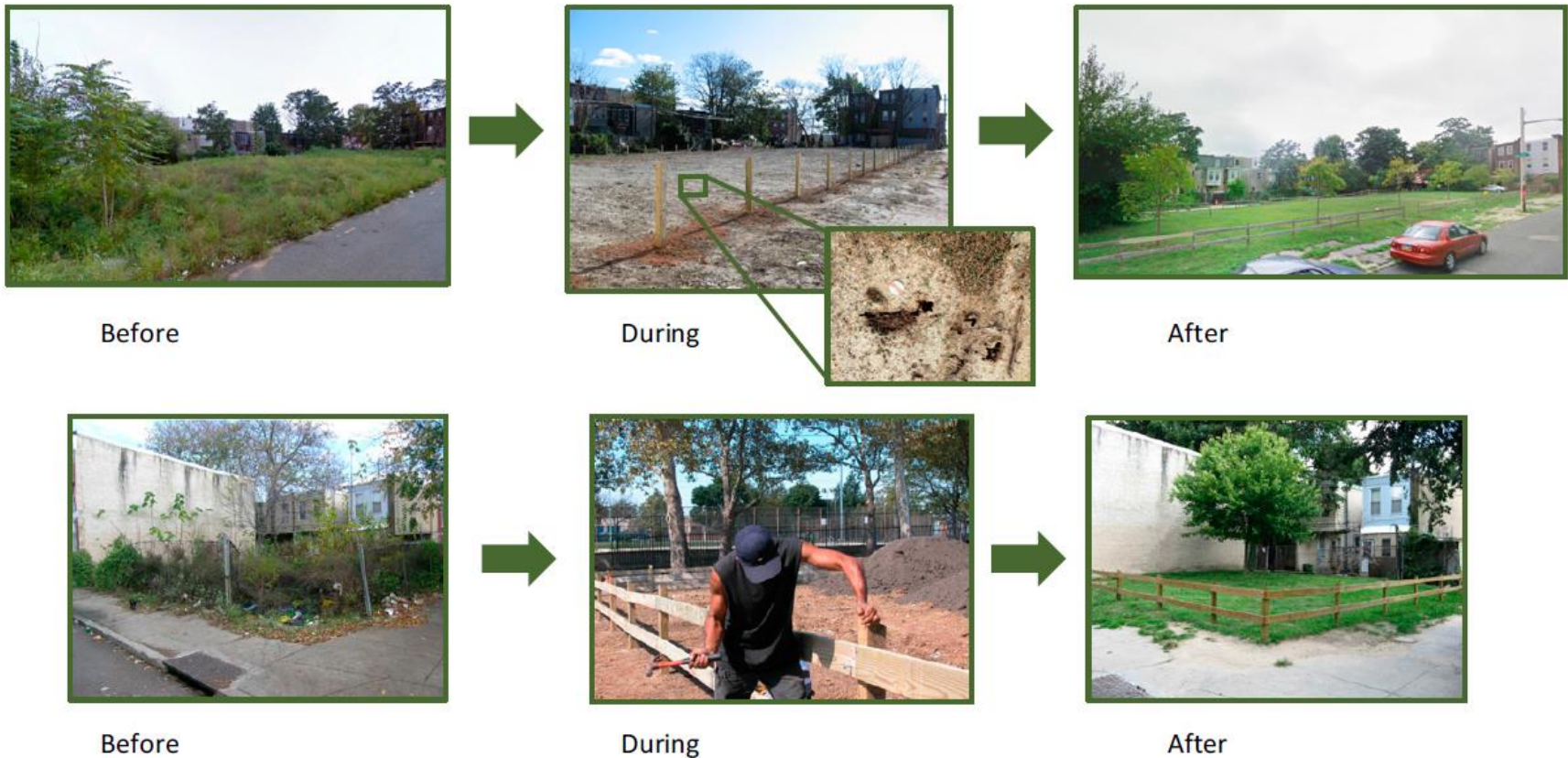


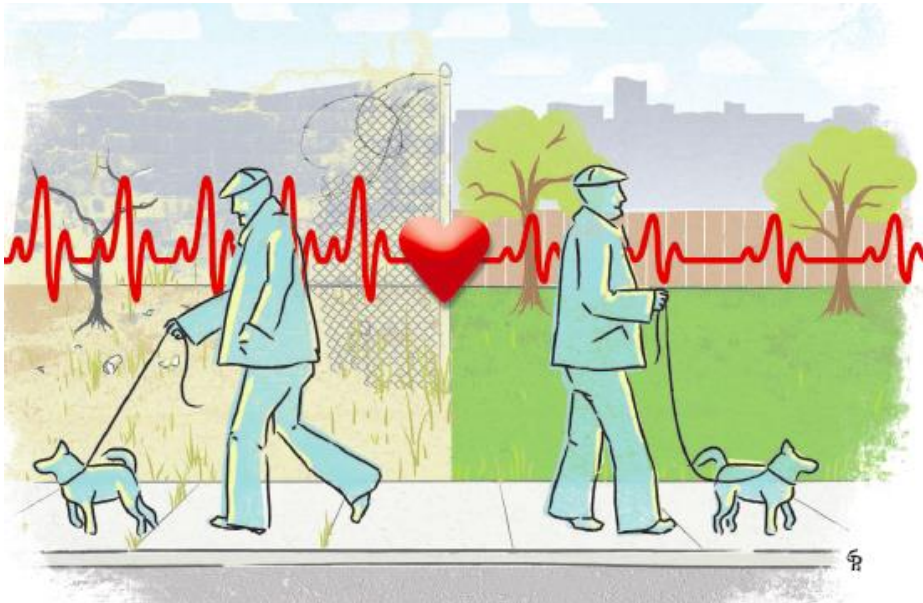
Fig. 1. Vacant land treatment process showing blighted preperiod conditions and postperiod restorations. The magnification (*Upper Center*) shows the grass seeding method used to rapidly complete the treatment process. Lots shown here are representative of those in the study, although for purposes of confidentiality are not actual study lots.

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## **PHS LandCare Program is now citywide**

- **Expanded through partnerships with local contractors to the entire city, transforming more than 12,000 vacant lots and more than 18 million square feet of land**
- **~1/4 of vacant lots have been remediated and maintained**
- **Funds to support program are provided by local community groups, the city, and private philanthropy**
- **About \$5 per square meter (\$1,000-1,300), and then \$0.5 per square meter in annual maintenance (\$150 per year)**

# Community Input and Early Findings on Stress



Significant drop in heart rate when in view of newly greened lots

“You got to watch yourself walking past the lots because you don’t know who’s out there.”

“It’s not safe walking past [abandoned homes] because the one across from me looks like it’s getting ready to cave in.”

“If I could change things I would. There wouldn’t be so many vacant lots [and] abandoned houses.”





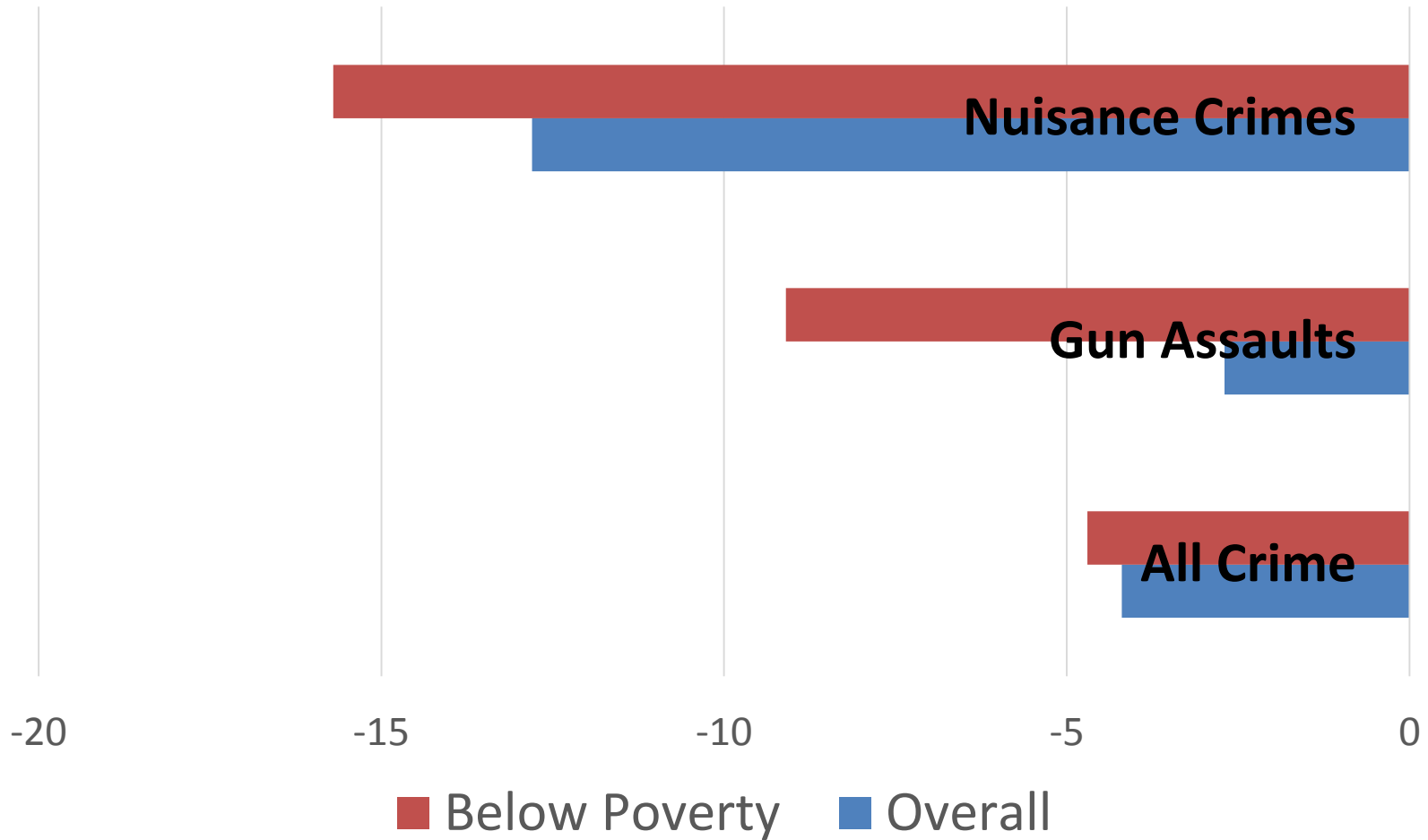
# Philadelphia LandCare/ THE RESULTS



Interventions establish focus areas with clusters of “cleaned and greened” vacant lots throughout Philadelphia

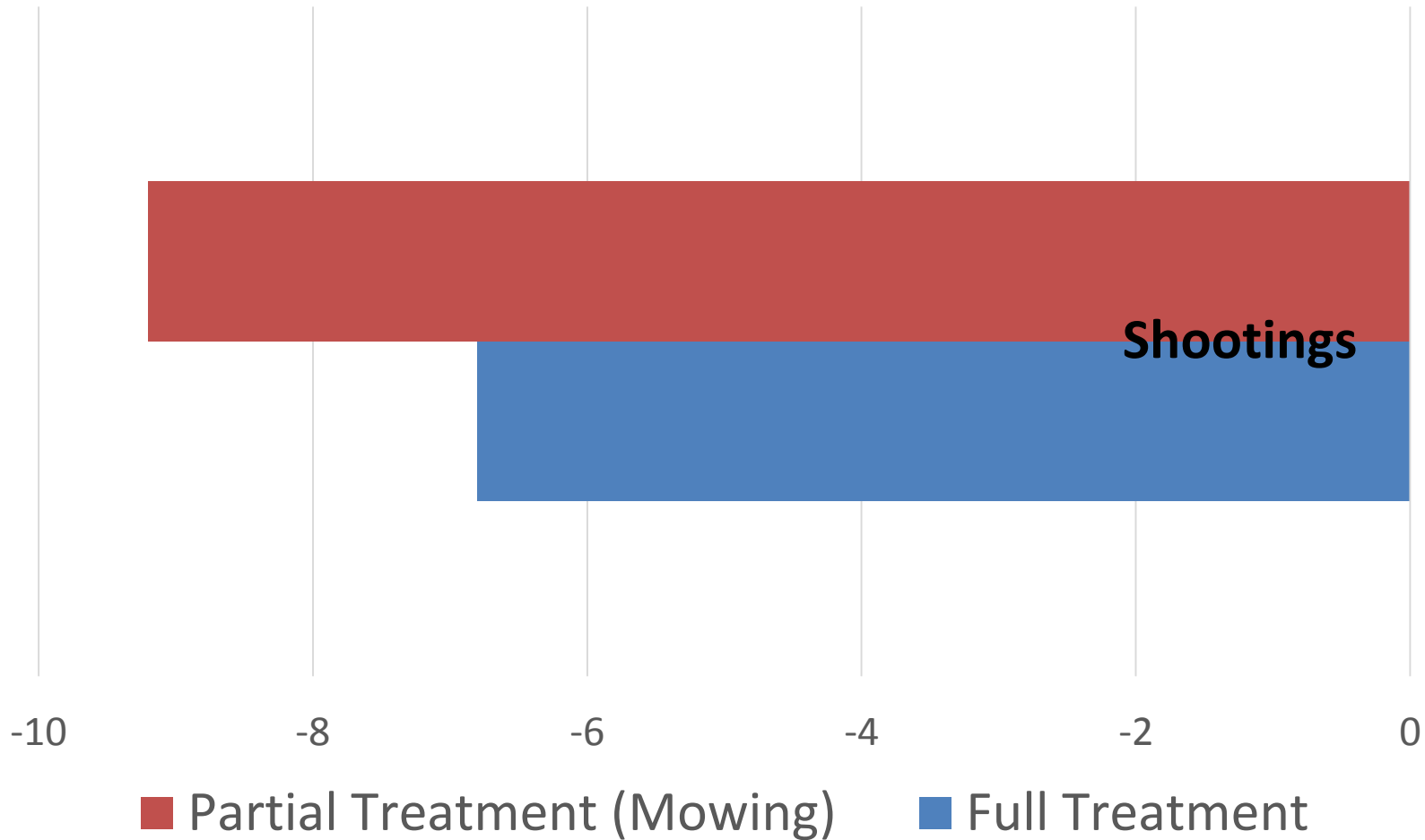
economies of scale

# Randomized Controlled Trial in Philadelphia: % Reduction in Crime



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## Results from Randomized Trial in Philadelphia: % Reduction in Shootings



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## Implications for gun violence and serious crime

- About \$15,000 investment to prevent a shooting
- \$1 in vacant lot remediation returns \$26 in net benefits to taxpayers and \$333 to society at large
- Suggests sizable reductions in gun crimes could be achieved through citywide efforts
- Now part of city's violence prevention plan

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## **Evidence of programs with similar benefits exist from studies of Youngstown, OH and Flint, MI**

- **Youngstown Neighborhood Development Corporation (YNDC) vacant lot remediation program collaborates with residents and community groups**
  - **Kondo et al. (2016) found significant reductions in violent and property crimes nearby remediated lots compared to vacant lots yet to be remediated**
- **Flint, Michigan the local land bank (Genesee County Land Bank Authority, C & G) relies on neighborhood groups to remediate vacant properties**
  - **Heinze et al. (2018) found reductions in violent crimes on streets after the program was implemented compared to streets with vacant lots not yet remediated**

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# Conclusions

**Evidence from Philadelphia shows that vacant lot remediation can be designed to be scalable to entire cities**

**Abating vacant lots can dramatically reduce gun violence in neighborhoods – in addition to other benefits**

**Abating vacant lots doesn't require major structural investments from taxpayers**

**Partnerships between landscape workers, contractors, and municipal organizations**

**Given gun violence and related problems are highly concentrated in the same places, strategic cleanups can have large-scale population benefits**

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## Related Papers

Branas, C. C., South, E., Kondo, M. C., Hohl, B. C., Bourgois, P., Wiebe, D. J., & MacDonald, J. M. (2018). Citywide cluster randomized trial to restore blighted vacant land and its effects on violence, crime, and fear. *Proceedings of the National Academy of Sciences*, 115(12), 2946-2951.

Moyer, R., MacDonald, J. M., Ridgeway, G., & Branas, C. C. (2019). Effect of remediating blighted vacant land on shootings: a citywide cluster randomized trial. *American journal of public health*, 109(1), 140-144.

**THANK YOU!**

