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Urban vacant lot stabilization and substance abuse outcomes

Submission date
27/02/2017

Recruitment status
No longer recruiting

Registration date
03/03/2017

Overall study status
Completed

Last Edited
26/04/2023

Condition category
Mental and Behavioural Disorders

[ ] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[X] Results
[ ] Individual participant data

Plain English summary of protocol

Background and study aims
The aim of this study is to find out whether “greening” vacant land to create little parks near where people live, improves people’s health and safety. Vacant lots are in great abundance, are singled out by community members as important, and are highly modifiable, with the potential for sustained, long-term health and safety benefits at relatively little cost. In 1999, the Pennsylvania Horticultural Society began a program to stabilize and maintain vacant lots in key Philadelphia neighbourhoods. This study tests the impact of such a program on public substance (drug) use, drinking and related behaviours.

Who can participate?
English and Spanish speaking people aged 19 and over who live in four areas of Philadelphia

What does the study involve?
420 vacant lots in four areas of Philadelphia are randomly allocated into three groups. The first group of vacant lots undergo stabilization, which involves “cleaning and greening” by removing trash and debris, grading the land, planting grass and a small number of trees to create a park-like setting, and installing low wooden perimeter fences to show that the lot is cared for and deter illegal dumping. This is carried out by well-coordinated teams of workers, many of whom come from local urban neighbourhoods, along with regular monthly maintenance of treated lots including grass cutting, tree pruning, fence repair, and trash clean-up. The second group of vacant lots undergo trash clean-up only, which involves removing trash and debris, mowing existing grass on the lot, and regular monthly maintenance including continued grass cutting and trash clean-up. The third group of vacant lots do not undergo stabilization or clean-up. Substance abuse, drinking and related health and safety outcomes on or near the lots are measured in the years before and after the intervention using data collected from the local police and by interviewing local residents about their health. The cost-effectiveness of vacant lot stabilization is also calculated.

What are the possible benefits and risks of participating?
The benefits of participating in this study are access to a newly created local park and contributing to a better understanding of the value of greenery and parks in cities. The risks of participating are minimal.

Where is the study run from?
1. University of Pennsylvania (USA)
2. Columbia University (USA)

When is the study starting and how long is it expected to run for?
February 2011 to January 2018

Who is funding the study?
1. National Institutes of Health (USA)
2. Centers for Disease Control and Prevention (USA)

Who is the main contact?
Dr Charles Branas

Contact information

Type(s)
Scientific

Contact name
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Additional identifiers

Protocol serial number
R01AA020331

Study information

Scientific Title
A randomized trial of urban vacant lot stabilization and substance abuse outcomes

Study objectives
1. The stabilization of randomly chosen vacant lots will change the public occurrence of illegal drug trafficking and consumption compared with vacant lots that have been randomly chosen to receive only trash clean-up and lots that have been randomly chosen to receive nothing.
2. The stabilization of randomly chosen vacant lots changes the public occurrence of illegal drunkenness and drinking compared with vacant lots that have been randomly chosen to receive only trash clean-up and lots that have been randomly chosen to receive nothing.
3. The incremental cost-effectiveness of vacant lot stabilization will be high in terms of the cost

of vacant lot stabilization per instances of illegal drug trafficking and consumption and illegal public drunkenness and drinking avoided.

Ethics approval required
Old ethics approval format

Ethics approval(s)
University of Pennsylvania Institutional Review Board, 14/07/2015, ref: 816097

Primary study design
Interventional

Study design
Controlled parallel-group cluster randomized trial

Study type(s)
Prevention

Health condition(s) or problem(s) studied
Substance abuse

Interventions
420 vacant lots stratified in four geographic sections of Philadelphia are randomised into three trial arms:
1. Vacant lot stabilization (full treatment)
2. Trash clean-up only (trash control)
3. No vacant lot stabilization or clean-up (no treatment).

The first intervention tested involves the “cleaning and greening” of vacant lots via a standard, reproducible process of removing trash and debris, grading the land, planting grass and a small number of trees to create a park-like setting, and installing low wooden perimeter fences to show that the lot is cared for and deter illegal dumping. This intervention is completed via a well-coordinated teams of workers, many of whom come from local urban neighborhoods affected by vacant land, and an economical grass hydroseeding method that can quickly seed large areas of land by spraying a slurry mixture of seed and mulch. The intervention additionally includes regular monthly maintenance of treated lots including grass cutting, tree pruning, fence repair, and trash cleanup.

A second, simpler vacant lot intervention is also tested that is a standard, reproducible process of removing trash and debris, mowing existing grass on the lot, and regular monthly maintenance including continued grass cutting and trash cleanup.

Both interventions are performed for all study vacant lots to which they are randomly assigned over a two-month period from 01/04/2013 to 31/05/2013.

Both area-wide outcome measures in and around each cluster, as well as participant-level outcome measures are collected and analyzed. Violence and crime data are collected from local police and aggregated by month for 18 pre-intervention months and 18 post-intervention months, for a total of 36 observation periods. These data include the dates and address locations of six outcomes: gun assaults, nongun assaults, burglaries, robberies and thefts, narcotics possession, sales, and trafficking, and nuisances. Nuisances are defined as the

summation of curfew violations, disorderly conduct, public drunkenness, illegal dumping, loitering, noise violations, prostitution, and vandalism. The address location of each violence and crime event is geographically assigned to a point-in-space and a kernel density estimate is used to calculate events per square mile for all outcomes at the centroid points representing each vacant lot.

Perceptions of violence, crime, nuisances, and safety are surveyed from participants. The same questions are asked to all participants across all 4 waves of the survey at 2 time points at baseline and at 2 time points post-intervention. Participants are asked to focus their responses to their experiences within the past 30 days to avoid telescoping and over-estimation by participants. Various approaches are used to measure participant-reported outcomes: visual analog scales, Likert scales, and binary true/false questions.

Intervention Type
Other

Primary outcome(s)
Illegal drug trafficking and consumption, measured using data collected from local police and aggregated by month for 18 pre-intervention months and 18 post-intervention months

Key secondary outcome(s)
Illegal drunkenness and drinking, measured using data collected from local police and aggregated by month for 18 pre-intervention months and 18 post-intervention months

Completion date
31/01/2018

Eligibility

Key inclusion criteria
Randomly sampled English and Spanish speaking individuals, aged 19 years and older, who lived within the clusters

Participant type(s)
Healthy volunteer

Healthy volunteers allowed
No

Age group
Adult

Sex
All

Key exclusion criteria
Non-English, non-Spanish speaking, not residents living within clusters

Date of first enrolment
01/10/2011

Date of final enrolment
01/11/2014

Locations

Countries of recruitment
United States of America

Study participating centre
University of Pennsylvania
Philadelphia
United States of America
19104

Study participating centre
Columbia University
New York
United States of America
10032

Sponsor information

Organisation
National Institutes of Health

ROR
https://ror.org/01cwqze88

Organisation
Centers for Disease Control and Prevention

ROR
https://ror.org/00qzjvm58

Funder(s)

Funder type
Government

Funder Name
National Institutes of Health (ref: R01AA020331)

Alternative Name(s)
US National Institutes of Health, Institutos Nacionales de la Salud, NIH, USNIH

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
United States of America

Funder Name
Centers for Disease Control and Prevention (ref: R49CE002474)

Alternative Name(s)
United States Centers for Disease Control and Prevention, Centers for Disease Control, U.S. Centers for Disease Control and Prevention, US Centers for Disease Control and Prevention, Centros para el Control y la Prevención de Enfermedades, Communicable Disease Center, Center for Disease Control, CDC, U.S. CDC, USCDC

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
United States of America

Results and Publications

Individual participant data (IPD) sharing plan
The current data sharing plans for the current study are unknown and will be made available at a later date.

IPD sharing plan summary
Data sharing statement to be made available at a later date

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	20/03/2018	07/08/2018	Yes	No

Results article	results	01/01/2019	04/12/2018	Yes	No
Results article	results	06/07/2018	16/01/2019	Yes	No
Results article		08/11/2021	26/04/2023	Yes	No