CONNECTED IN CRIME
using network science to reduce gun violence

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what is network science?
Baby dies day after she and dad shot: 'We have another tragedy'

March 19, 2013

6-month-old Jonylish Watkins died one day after she and her father, Jonathan Watkins, 29, were shot while in a vehicle in the Woodlawn neighborhood.
Associate
Shooting Victim
Co-Offending Tie
Family Tie
Associate

Shooting Victim

Co-Offending Tie

Family Tie
40% OF ASSOCIATES ARE VICTIMS
what has network science told us about gun violence already?
gun violence concentrates socially
Boston
Boston

6% of population

85% of all gunshot injuries

Papachristos, Hureau, & Braga 2012
Chicago, 2012 - 2016

Papachristos, Wildeman, & Roberto 2014
Chicago, 2012 - 2016

- 6 % of total population
- 40 % of arrested population
- 70 % of all shootings
- 89% in a single network

Papachristos, Wildeman, & Roberto 2014
gun violence concentrates socially

- gun violence is contagious
40% of associates are victims.
Predicted Probability of Gunshot Victimization by Network Exposure to Guns for 14 to 24 year old Men

Note: Predicted probabilities are estimated with remaining variables held constant at their mode.
Predicted Probability of Gunshot Victimization by Network Exposure to Guns for 14 to 24 year old Men

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Figure 3. Three Cascades of Gunshot Violence Episodes Inferred From the Study Period

A  12 People shot between May 2009 and December 2012

B  34 People shot between February 2008 and August 2012

C  64 People shot between August 2008 and March 2014

collaborators: Ben Green & Thibaut Horel
63%
SHOOTING CASCADES

63%

83 days between shootings

collaborators: Ben Green & Thibaut Horel
using network science to solve problems
force multiplier

enhance and enrich existing efforts
Largest Shooting Network in Back of the Yards over last three years
Thank You

@AVPapachristos

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