

Street-Segment Patrolling

Testing street-segment patrolling to reduce crime

Agency: Grand Prairie (TX) Police Department

Project Duration: 07/01/18–12/31/18

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Context

Law-enforcement agencies use a variety of methods to maintain order. Performance assessments and evaluations help agencies to identify where resources need to be allocated and which policing strategies to employ to produce better outcomes.

Key Finding

The north side experienced a larger decrease in crime compared with the south side, during the trial period, but this difference was not statistically significant.

*BetaGov trains agency personnel to become research-savvy "Pracademics" who lead trials.

Background

Various patrolling strategies have been adopted in efforts to better deter and interrupt criminal activity. One of the most common methods is "beat" patrolling, which gives officers the authority and responsibility to identify crime areas and patterns in their assigned beat and to develop solutions to address the problems in those areas. Grand Prairie, Texas, uses beat patrolling. Street-segment patrolling is similar to hot-spots patrolling, in which officer assignments are based on crime incidence. Street-segment patrolling allows a focus on areas that receive a large number of calls for service. Grand Prairie PD is embracing evidence-based policing and launched a study to assess whether street-segment patrolling improves outcomes.

Study Design

This study entails a quasi-experimental, difference-in-differences design to assess whether street-segment patrolling is more effective than standard beat patrolling. The project focused on calls for service for burglary, robbery, and assault. The north side of the city was assigned to the intervention condition (street-segment patrolling). Officers assigned to the north side made visible visits to each street segment five times every shift, for ten minutes each time. The south side of the city was assigned to the comparison condition and continued with the usual patrolling strategy. Surveys were also distributed to officers to collect perceptions of the patrolling strategies. Using archived data from 2015 to 2018, crime trends were modeled for both city areas with data from August 2016 to December 2016 used as baseline.

Results

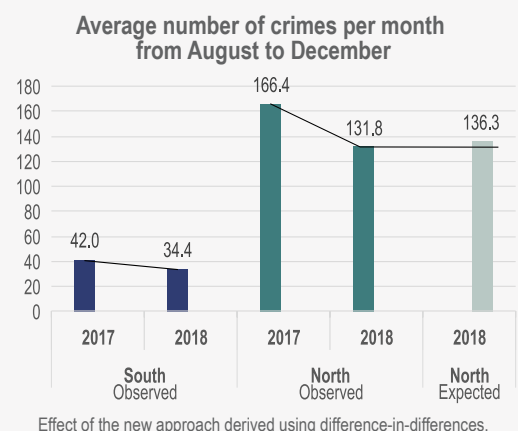
A direct comparison of post-intervention trends shows a significantly greater crime drop on the north side compared with the south side ($p < 0.05$).

However, pre-existing differences in crime trends across the north and south sides of Grand Prairie were detected. Non-experimental causal-inference techniques were used to account for these differences. Sectors from the north and south sides were matched to ensure common pre-existing crime trends.

After controlling for pre-existing differences in trends, the north side was shown to have an additional reduction in burglary, robbery, and assault events compared with the south side; this adjusted difference was not statistically significant.

Post-trial survey responses document that 60% of officers would like to continue with the street-segment patrolling model. Additionally, about 85% of respondents are open to future research to identify methods for reducing crime, suggesting widespread enthusiasm in the department for pursuing evidence-based policing.

Further study, including longer time trends and an experimental design if feasible, is justified.



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