Chicago police cameras more effective when clustered, study says

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(Phys.org) -- Chicago's network of police cameras is more effective at reducing crime in high-crime areas than in low-crime areas, according to a new study.

The report, co-authored by Rajiv Shah, University of Illinois at Chicago adjunct assistant professor of communication, suggests that blue-light cameras should be concentrated in high-crime areas rather than spread throughout a city.

This "hotspot" approach differs from the way cameras are used in many cities, says Shah, who studies legal and policy implications of communication technologies.

"The idea championed by former mayor Richard Daley of placing a camera on every corner results in the vast majority of those cameras having little or no impact on reducing crime," he said.

Shah and co-author Jeremy Braithwaite, a doctoral student at the University of California-Irvine, analyzed two previous studies -- one by students at Northwestern University and the other by the Chicago Police Department -- that investigated the effectiveness of Chicago's surveillance network.

Their analysis indicates that the initial crime level of an area where a camera was placed had a significant effect on the camera's overall impact. Cameras in high-crime areas were associated with large

reductions in crimes, while medium- to low-crime areas experienced minimal change.

"Diffusing a large number of cameras throughout a city does not appear to be effective in reducing crime," Shah said. "Instead, the targeted use of a smaller number of cameras in high-crime areas is much more effective."

The researchers offer three possible explanations for the findings:
-High-crime areas are likely to have increased police presence and additional strategies at work.
-Cameras in high-crime areas are more likely to be monitored at all times.
-The apparent drop in crime in high-crime areas could be partly due to "regression to the mean" -- a statistical effect in which first measurements are extreme and the second measurement tends to be closer to the average.

The researchers describe the impact of surveillance in high-crime areas as the "catalyst effect" of cameras.

"The act of placing cameras in high-crime areas pushes the police to focus their efforts in these areas, thus reducing crime," Shah said.

Further research with experimental controls will be needed to separate out the effects of other policing efforts and to isolate the catalyst effect of cameras, Shah said. Technological advances may also help measure the benefit that cameras provide.

"Cameras have limitations," Shah said. "They are only as good as their technology and the person watching the camera."

The full report, "Spread Too Thin: Analyzing the Effectiveness of the

Chicago Camera Network on Crime," appears in the forthcoming issue of *Police Practice and Research: An International Journal*.

Provided by University of Illinois at Chicago