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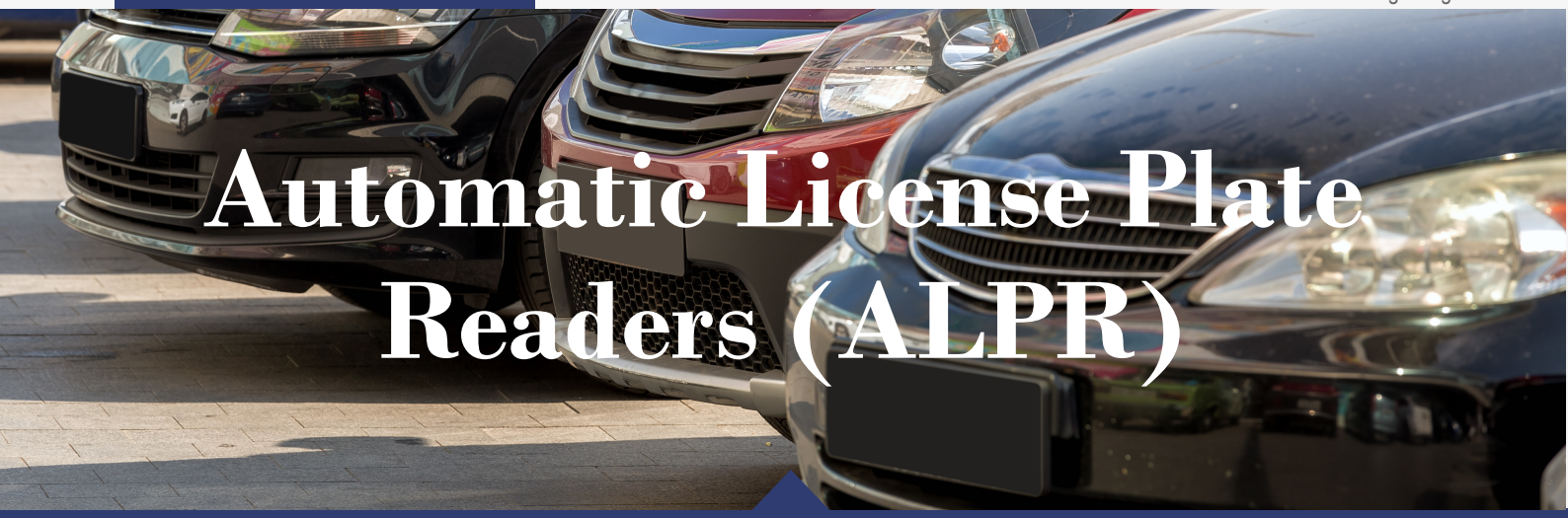

Automatic License Plate Readers (ALPR)

ALPR technology for identifying stolen/wanted vehicles

Agency: Vallejo (CA) Police Department (PD)

Trial Duration: 04/10/17–07/30/17

Pracademic*: Lieutenant Jason Potts

Context
Manually recording license plate numbers and matching them to a law enforcement database is cumbersome and inefficient. Automatic License Plate Reader (ALPR) technology simplifies the process of checking cars for stolen and wanted status and may result in improved efficiency and greater identification of wanted vehicles.

Key Finding
ALPR technology identified more stolen vehicles and assisted in more criminal investigations than traditional manual methods.

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

Background

Automatic license plate readers (ALPR) utilize a camera with the ability to scan thousands of plates daily, comparing them to DOJ hot lists and assisting police by automating processes to locate wanted vehicles. ALPR provides instant feedback for investigations involving stolen vehicles and license plates, wanted subjects, and missing at-risk individuals. ALPR can identify license plates at specific locations to locate suspects of criminal investigations, canvas crime scenes, and identify vehicles through partial and incomplete suspect car descriptions. Traditional methods of entering license plate data into a mobile data terminal or committing wanted plates to memory is often a difficult task.

Trial Design

The Vallejo PD outfitted patrol cars with ALPR technology and cars were randomized each day to have the ALPR alert on (intervention) or off (control). Officers selected cars based on seniority. Control officers were blinded and had to manually run license plates via an MDT or dispatch to locate stolen vehicles and wanted subjects. The ability to locate and recover stolen cars was then compared between the ALPR data and records management system (RMS).

Results

There were 610 observations on 4 cars over the 75 days of the trial (454 observations for intervention, 156 observations for control). The table below shows outcomes by condition. ALPR cars identified more stolen or wanted individuals than the control cars ($p<0.05$). Although the technology detected more stolen plates, this was not statistically significant when considering number of hits. Arrests were less likely to occur in the Intervention group when considering number of hits ($p<0.05$). An unexpected finding was that 35% of hits were misreads. This trial shows the efficiency of the ALPR technology, potentially allowing patrol officers to be more efficient in locating stolen cars.

Primary Outcomes by Condition

	Intervention	Control
Total Hits	454	156
Stolen Vehicle Hits	95	34
Stolen Plate Hits	359	122
Stolen Vehicle Recoveries	24	10
Stolen Vehicle Arrests	12	6

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