USING NIBRS DATA TO REDUCE CRIME

"Robberies up by nearly 50%" was a 2019 headline that led a mid-sized Southeastern police department to seek better strategies for targeting an emerging crime problem. The department addressed the spike by using its newly available incident-based data to gain an in-depth understanding of recent robbery incidents. The structured nature of these data enabled efficient tactical crime analysis and helped personnel identify patterns in victimizations. Department leaders used this information to develop a series of coordinated tasks aimed at reducing the opportunity for offending. Within a month of the headline, robberies in the jurisdiction decreased by more than 60%.

The department had recently upgraded its records management system (RMS) to collect incident-based data compliant with the FBI's National Incident-Based Reporting System (NIBRS). The department's previous RMS did not capture information on offense details and incident characteristics in a standardized, searchable format. The structure and quality of NIBRS data enabled the department to quickly develop effective crime reduction strategies by analyzing recent robbery incident details captured in the RMS.

Tactical Crime Analysis—the study of recent criminal incidents and potential criminal activity. The technique examines crime characteristics—the what, when, where, who, and how of each incident—to assist in problem-solving by identifying patterns and trends, developing investigative leads and suspects, and clearing cases.

PATH TO SUCCESS

Data Collection

NIBRS uses standardized, structured data fields to capture detailed information on the nature and type of offenses and the characteristics of victims, offenders, and persons arrested in connection with a crime incident.

Problem Specification

NIBRS-formatted data elements allowed personnel to organize, filter, search, and match incident details in order to answer critical questions about recent robberies and to describe a well-defined problem.

Analysis & Interpretation

NIBRS data are uniform and structured; the improved data quality made it easier for personnel to categorize offense details, summarize characteristics, compare cases, and visually display information to detect patterns in victimization and offending.
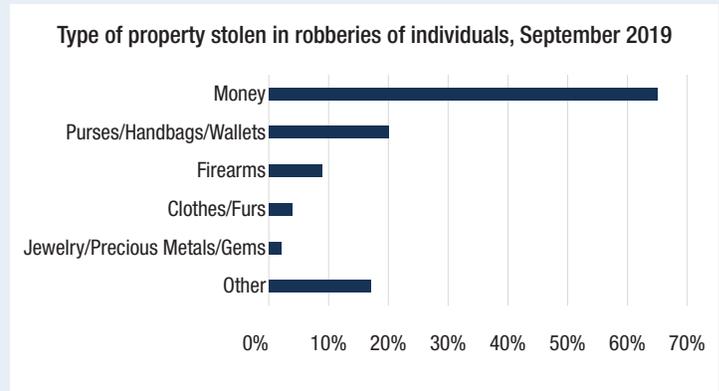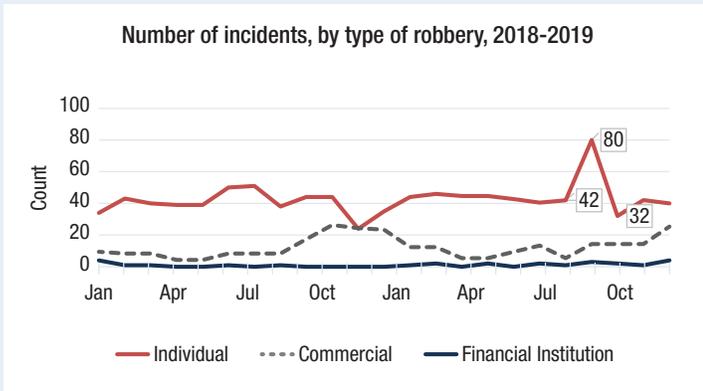
Data-Driven Response

Profiles of victim targets, crime locations, and incident characteristics were used to effectively deploy resources by anticipating future victimizations and developing strategies aimed at reducing the opportunity for offending.

TACTICAL CRIME ANALYSIS:
LOOKING AT WHAT, WHEN, WHERE, WHO, AND HOW

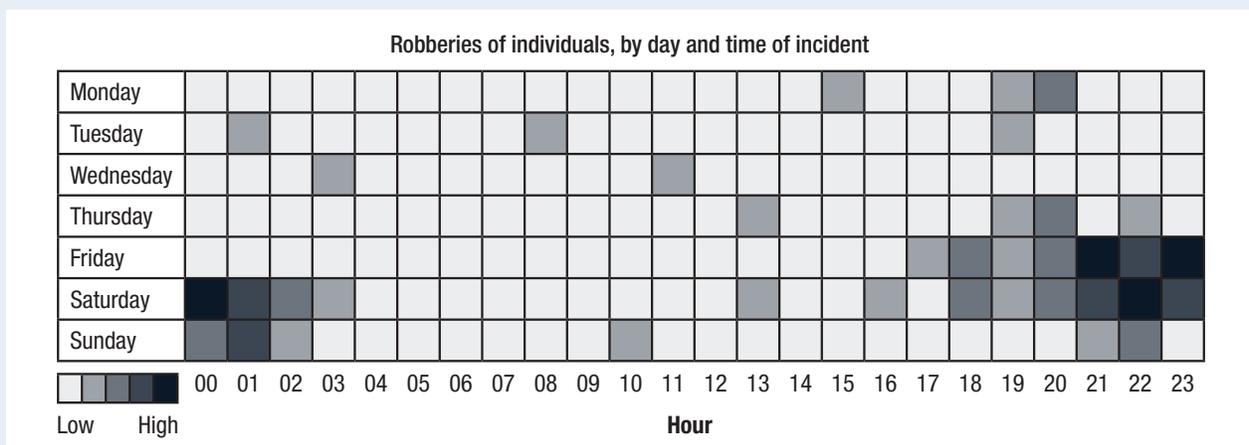## PROBLEM SPECIFICATION: Understanding "WHAT"

ANALYSIS: Personnel summed the number of incidents, by robbery type, for each month of 2018 and 2019 and compared monthly totals to identify higher-than-expected counts. They also used standardized fields to determine the percent of individual robberies with specific types of stolen property.

Number of incidents, by type of robbery, 2018-2019

Legend: —— Individual · · · · Commercial —— Financial Institution

Type of property stolen in robberies of individuals, September 2019

INTERPRETATION: The robbery spike was due to an increase in victimizations of individuals, rather than of financial institutions or commercial establishments, and most victims reported being robbed of money.

PROBLEM SPECIFICATION: Determining "WHEN"

ANALYSIS: Personnel summed the number of individual robbery incidents by day of week and time of day to look for patterns in victimization.

Robberies of individuals, by day and time of incident

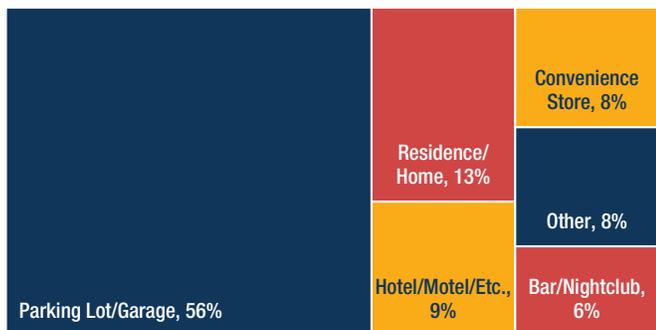Low — High   Hour: 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23

INTERPRETATION: Compared to previous weeks, the recent increase in individual robberies was largely due to more victimizations occurring between 9:00 p.m. and 1:00 a.m. on Friday and Saturday nights.
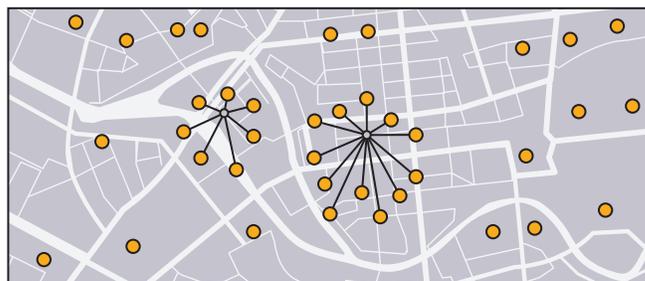
PROBLEM SPECIFICATION: Discovering "WHERE"

ANALYSIS: Personnel used standardized categories to determine which location types had the highest proportion of individual robbery incidents. They also mapped incident locations using geographic information system (GIS) software in order to display spatial patterns and identify hot spots.

Individual robberies, by incident location type, September 2019

- Parking Lot/Garage, 56%
- Residence/Home, 13%
- Hotel/Motel/Etc., 9%
- Convenience Store, 8%
- Other, 8%
- Bar/Nightclub, 6%

District 6: Individual robberies, by incident location, September 2019
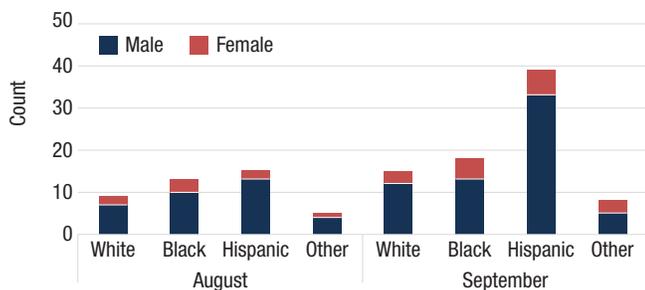

INTERPRETATION: More than half of individual robberies took place in parking lots and garages. Mapping incident locations revealed that most victimizations were concentrated within several apartment complexes. Findings were more apparent when data were limited to incidents that occurred on weekend nights.
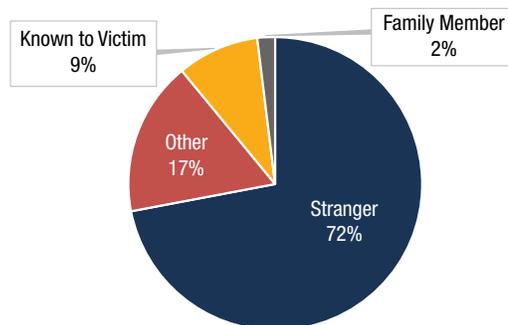
PROBLEM SPECIFICATION: Identifying "WHO"

ANALYSIS: Personnel categorized victims by demographic and incident characteristics to create victim profiles. Profiles from recent robbery incidents were compared to incidents that occurred prior to the spike.

Individual robbery victims by race or ethnicity and sex, August–September, 2019

Legend: Male, Female

Count axis: 0, 10, 20, 30, 40, 50

August: White, Black, Hispanic, Other
September: White, Black, Hispanic, Other

Individual robberies, by victim-offender relationship, September 2019

- Known to Victim 9%
- Family Member 2%
- Other 17%
- Stranger 72%

INTERPRETATION: Adult Hispanic males were being robbed at higher rates than in the previous month. Most incidents involved an offender who was a stranger to the victim.

PROBLEM SPECIFICATION: Establishing "HOW"

ANALYSIS: Personnel categorized incidents by weapon/force used to facilitate individual robberies and looked at relationships between weapon type and victim injury. They also used GIS software to map incidents involving firearms.

Number of individual robbery incidents, by weapon type and victim injury, September 2019

Count (y-axis: 0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50)

Legend:
- No Physical Injury
- Minor Injury
- Major Injury

Weapon types (x-axis): Firearm, Knife/Cutting Instrument, Personal Weapons, Other

District 6: Firearm-involved robbery incidents, by incident address, September 2019

Robbery Incidents
- 1
- 2-4
- 5 or more
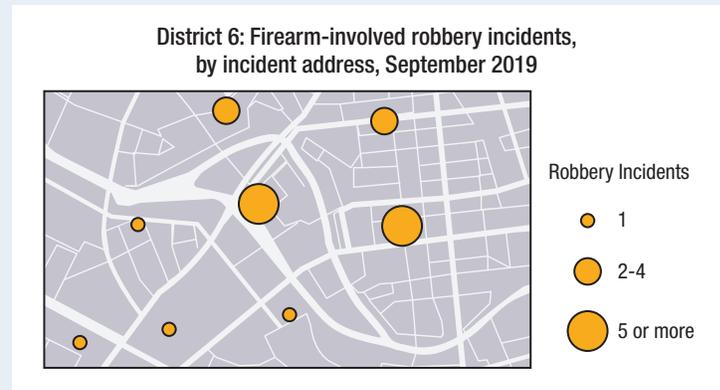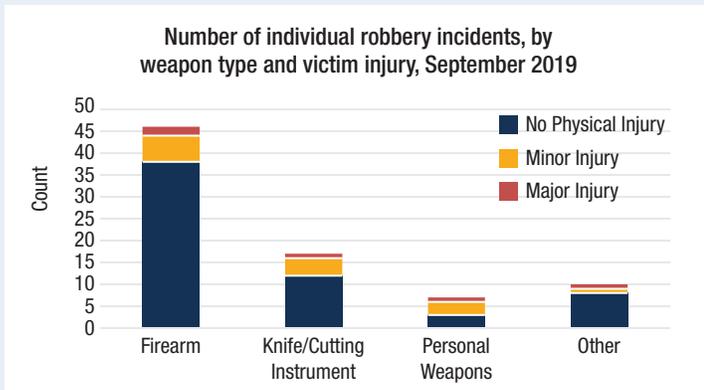
INTERPRETATION: More than half of individual robberies involved a firearm and most victims did not sustain physical injury. These firearm-involved incidents tended to cluster geographically.

USING NIBRS DATA TO DEPLOY RESOURCES MORE EFFECTIVELY

Department personnel conducted a tactical crime analysis by using their agency's crime data to identify a spike in recent robbery incidents and to develop a better understanding of the context and characteristics of offending in order to develop efficient strategies for reducing victimization and offending. The structure and quality of the agency's incident-based data allowed personnel to fully understand a specific crime problem and to quickly develop a targeted response.

Problem

Data indicated Hispanic males were robbed of money late on weekend nights, by strangers with firearms, in apartment complex parking lots and garages located in a single district of the city. Through data analysis, investigators determined offenders were targeting intoxicated males, likely on or right after payday, as they came home after a night out.

Response

Armed with critical information about recent robberies, officers increased patrol of hot spot apartment complexes after 9:00 p.m. on Friday and Saturday nights. Community service officers also reached out to apartment complex managers and residents to inform them of recent victimizations and to offer environmental and individual crime prevention strategies.

Result

Personnel reviewed robbery offense data over the next several weeks and determined that the department's tactical response was effective in reducing both victimization and offending.

Gardner, A., Aagaard, B., Cramer, J., and Pierce, E. (2021, September). Using NIBRS data to reduce crime. National Crime Statistics Exchange (NCS-X) Initiative Technical Assistance. Available at https://www.theiacp.org/sites/default/files/NCSX_Using_NIBRS_Data_to_Reduce_Crime.pdf

NCS·X NATIONAL CRIME STATISTICS EXCHANGE
Powering the Transition to NIBRS