

Seattle's Need for Improvement of Public Safety

The Seattle Police Department (SPD) has a great responsibility in this city which has a total population of 686,800 people and is spread out over 143 square miles. While they do an acceptable job at keeping Seattle safe, there is still room for improvement.

- Seattle has one of the highest crime rates in America, standing at 64 crimes per one thousand residents
- Seattle is safer than only 3% of all US cities
- Only 20% of customers of the SPD feel extremely safe in Seattle
- Only 23% of customers strongly agree that the SPD focuses on the public safety issues that concern them

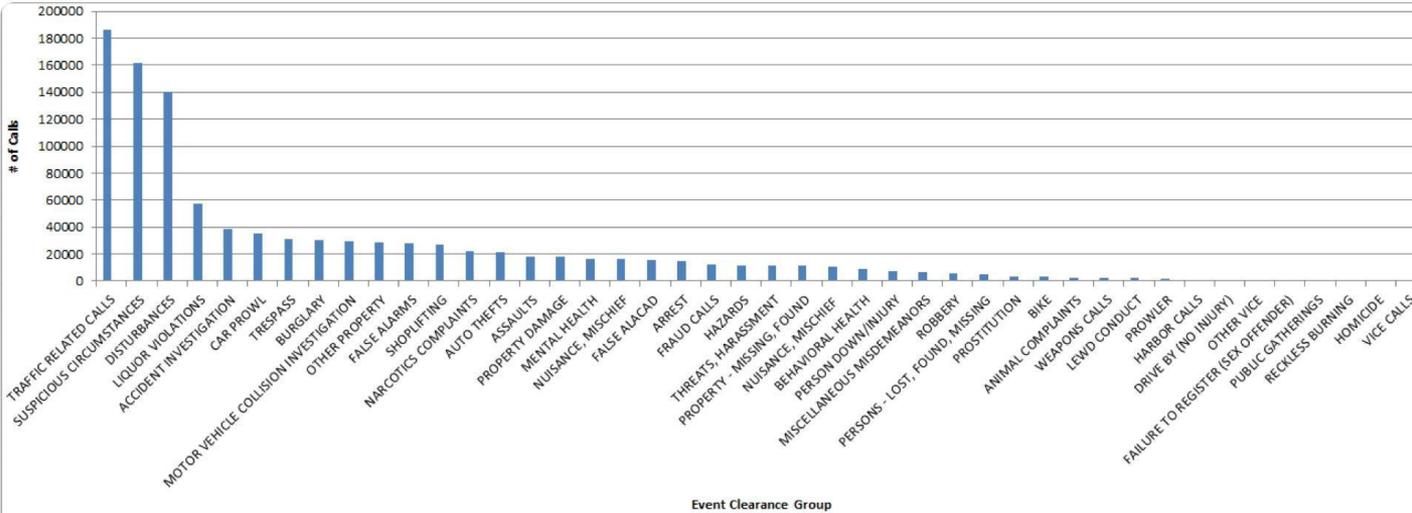
With careful analysis of the Call to Service data provided by the SPD, we have detected trends of multiple variables in past data and have correlated them with possible explanations.

Furthermore, we have come up with recommendations on how to fix these problems that have been revealed through these observations.

Overall Trends:

Distribution of Types of Crime

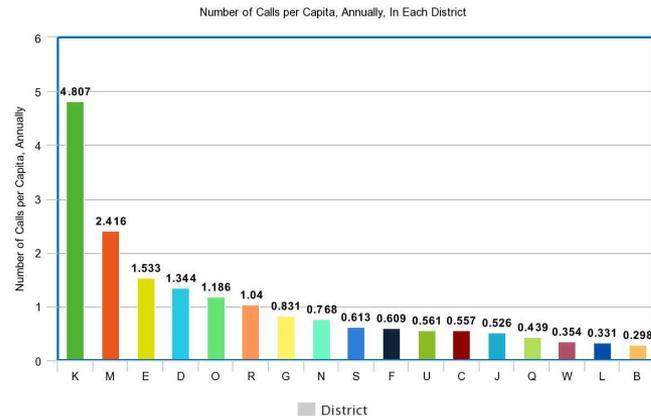
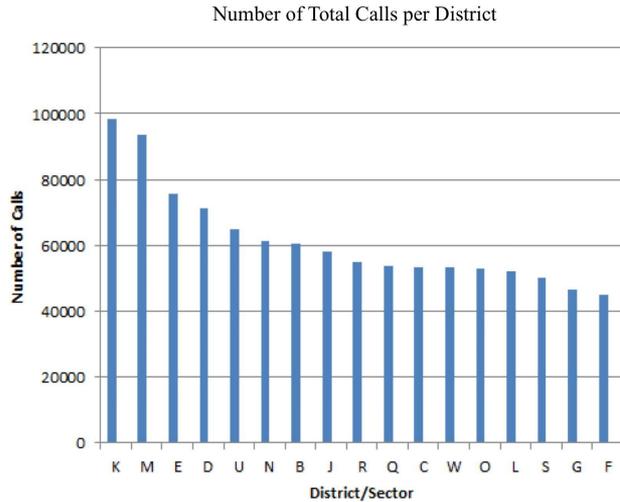
Data Table



TRAFFIC RELATED CALLS	186482	0.1788
SUSPICIOUS CIRCUMSTANCES	161248	0.1546
DISTURBANCES	140581	0.1348
LIQUOR VIOLATIONS	57130	0.0548
ACCIDENT INVESTIGATION	38369	0.0368
CAR PROWL	35129	0.0337
TRESPASS	31000	0.0297
BURGLARY	29943	0.0287
MOTOR VEHICLE COLLISION INVESTIGATION	29746	0.0285
OTHER PROPERTY	28954	0.0278
FALSE ALARMS	27745	0.0266
SHOPLIFTING	27037	0.0259
NARCOTICS COMPLAINTS	21986	0.0211
AUTO THEFTS	20890	0.02
ASSAULTS	17774	0.017
PROPERTY DAMAGE	17734	0.017
MENTAL HEALTH	16660	0.016
NUISANCE, MISCHIEF	16603	0.0159
FALSE ALACAD	15625	0.015
ARREST	14566	0.014
FRAUD CALLS	12617	0.0121
HAZARDS	11734	0.0112
THREATS, HARASSMENT	11161	0.0107
PROPERTY - MISSING, FOUND	11062	0.0106
NUISANCE, MISCHIEF	10439	0.01
BEHAVIORAL HEALTH	8707	0.0083
PERSON DOWN/INJURY	7472	0.0072
MISCELLANEOUS MISDEMEANORS	6284	0.006
ROBBERY	6059	0.0058
PERSONS - LOST, FOUND, MISSING	5053	0.0048
PROSTITUTION	2906	0.0028
BIKE	2898	0.0028
ANIMAL COMPLAINTS	2700	0.0026
WEAPONS CALLS	2506	0.0024
LEWD CONDUCT	2369	0.0023
PROWLER	1490	0.0014
HARBOR CALLS	736	0.0008
DRIVE BY (NO INJURY)	461	0.0004
OTHER VICE	262	0.0003
FAILURE TO REGISTER (SEX OFFENDER)	257	0.0002
PUBLIC GATHERINGS	235	0.0002
RECKLESS BURNING	228	0.0002
HOMICIDE	184	0.0002
VICE CALLS	14	1E-05
	0	0

- The most common type of crimes are traffic related, making up about 18% of total calls.
- Vice calls were the least common type of crime, making up about .001%

Overall Trends Con't:



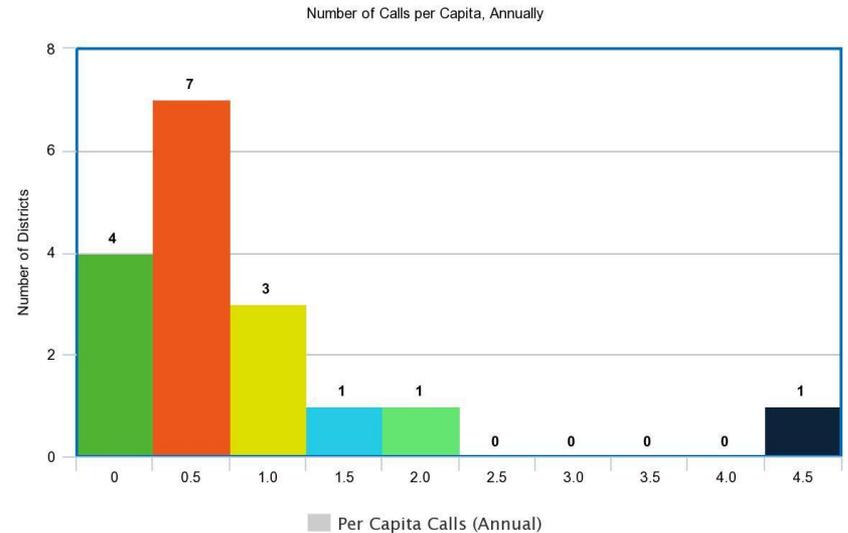
- The top graph shows the total number of calls for each district of Seattle
- The bottom graph shows the number of calls per capita annually for each district
- In both graphs, districts K and M have the highest amount of crime
- District B has the lowest amount of crime based on the number of crimes per capita annually

The Impact of Employment on Crime

- Using Seattle's 2017 population estimate in conjunction with the Call to Service data, the amount of annual calls per capita was approximately 0.608 overall for Seattle (Assefa).
- Districts K and M (outliers) have the two highest numbers of annual calls per capita, at 4.807 and 2.416, respectively.
- Forbes recently reported Seattle's unemployment rate to be 2.9%, while Districts K and M have respective unemployment rates of 9.1% and 11.1% (Worstall)
- Districts K and M both have higher amounts of crime and unemployment rates compared to Seattle as a whole.

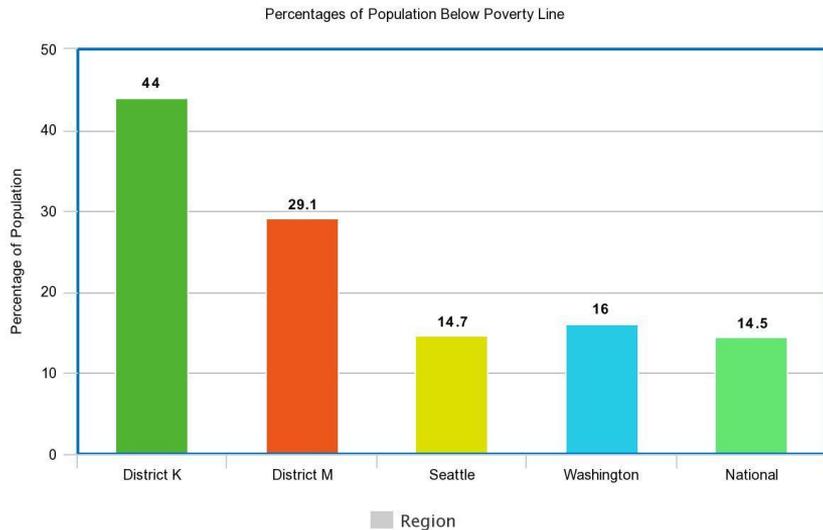
Solution:

- Extend employment outreach programs in these districts to curb the correlating crime rates



The Impact of Poverty on Crime

- The percentage of Seattle's population that lies below the poverty line is approximately 14.7% (Seattle).
- Districts K and M have much higher percentages below the poverty line, at 44% and 29.1%, respectively.



(Seattle, Gongloff)

meta-chart.com

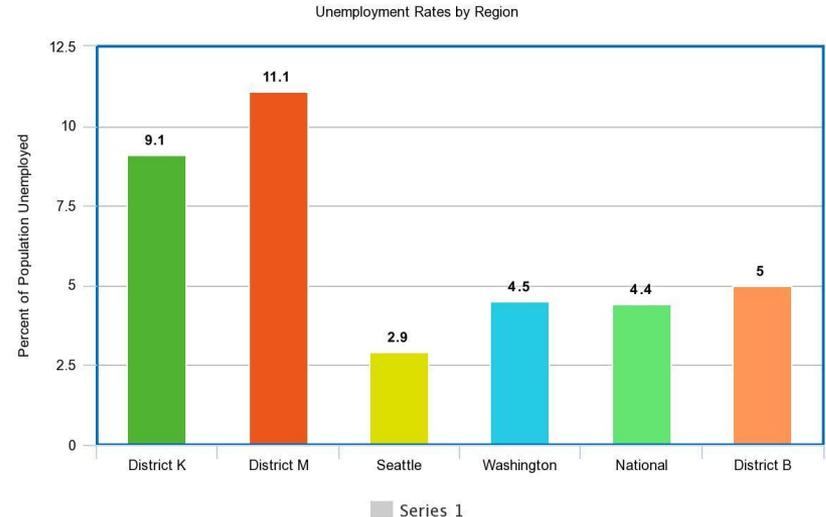
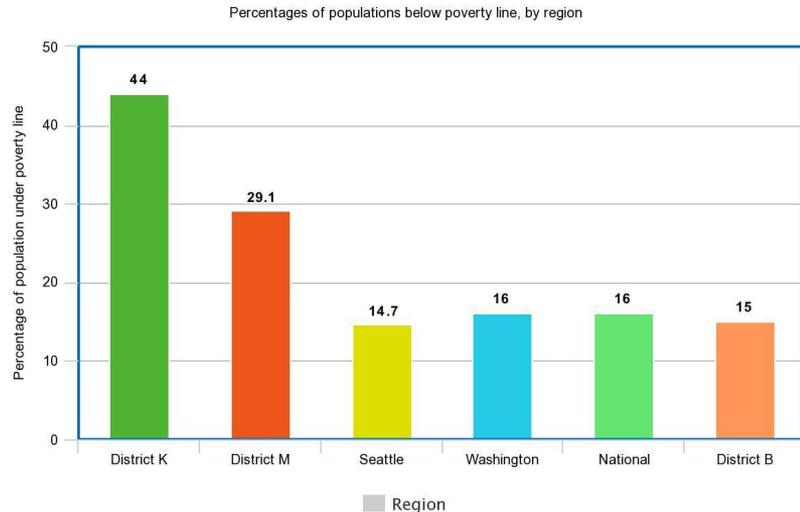
- Furthermore, the percentage of the population below the poverty line in districts K and M is considerably higher than the state and national percentages.

Solution:

- Addressing this underlying cause by ensuring adequate financial aid, access to affordable housing, and access to affordable meals could help to alleviate the pressures of poverty upon the community and therefore reduce the amount of crime.

Seattle's Top Performing District

- As would be expected, Seattle's district with the least amount of annual calls per capita exhibits the opposite qualities of the most call-dense districts.
- District B has an unemployment rate of approximately 5.0%, and only around 15.0% of the population living below the poverty line.
- Social programs employed in District B should be examined and replicated in more poorly-performing districts K and M, as the correlation between employment and poverty to amount of crime is clear.

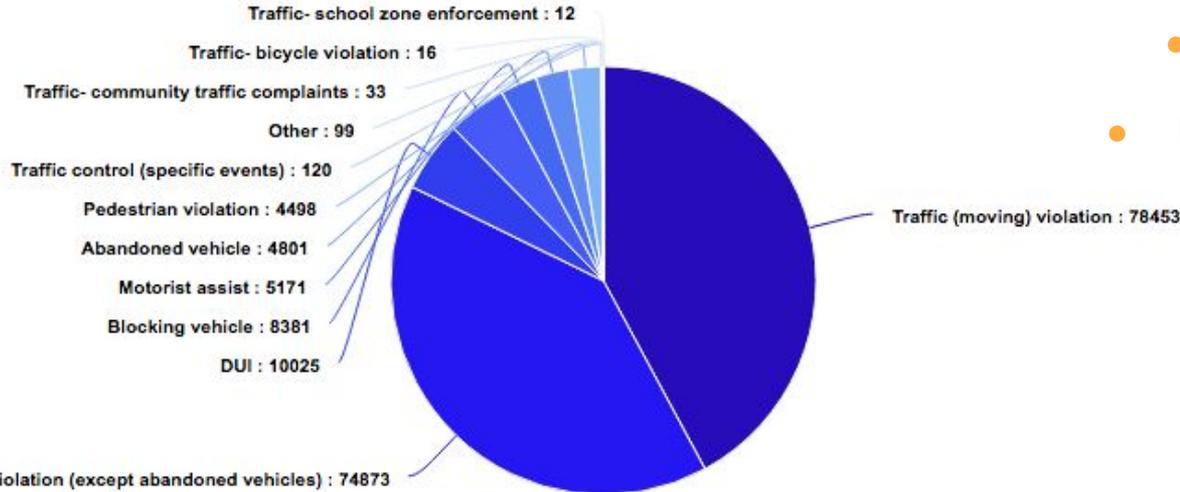


Break Down of Traffic Related Calls into Subgroup:

Percent of the Seattle Police Department's calls that are traffic related: **17.9%**

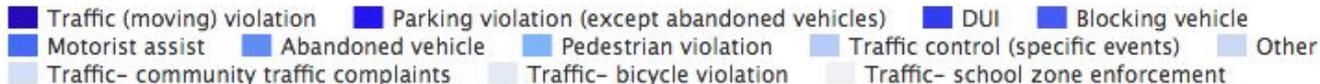
If they could cut down the number of traffic related calls, they would have more time to investigate more serious offenses. In this way, the number of inaccurate convictions would decrease while the overall public safety of Seattle would increase.

Distribution of Traffic Related Call

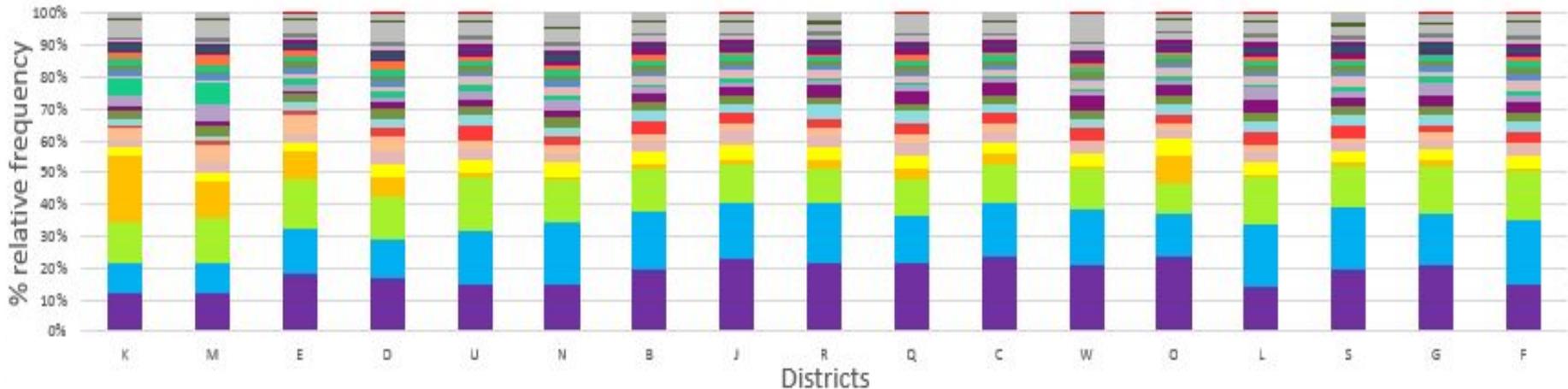


Solutions:

- Education/raising awareness of road rules and safety
- From our data, liquor violations are the 4th most common type of call
 - Therefore, enforcing valid identification when purchasing alcohol would reduce both liquor violations and DUI problems
- More available parking in city



Conditional Distribution of Crimes for Each District



- TRAFFIC RELATED CALLS
- LIQUOR VIOLATIONS
- TRESPASS
- OTHER PROPERTY
- NARCOTICS COMPLAINTS
- PROPERTY DAMAGE
- FALSE ALACAD
- HAZARDS
- NUISANCE, MISCHIEF
- MISCELLANEOUS MISDEMEANORS
- PROSTITUTION
- WEAPONS CALLS
- HARBOR CALLS
- FAILURE TO REGISTER (SEX OFFENDER)
- HOMICIDE
- SUSPICIOUS CIRCUMSTANCES
- ACCIDENT INVESTIGATION
- BURGLARY
- FALSE ALARMS
- AUTO THEFTS
- MENTAL HEALTH
- ARREST
- THREATS, HARASSMENT
- BEHAVIORAL HEALTH
- ROBBERY
- BIKE
- LEWD CONDUCT
- DRIVE BY (NO INJURY)
- PUBLIC GATHERINGS
- VICE CALLS
- DISTURBANCES
- CAR PROWL
- MOTOR VEHICLE COLLISION INVESTIGATION
- SHOPLIFTING
- ASSAULTS
- NUISANCE, MISCHIEF
- FRAUD CALLS
- PROPERTY - MISSING, FOUND
- PERSON DOWN/INJURY
- PERSONS - LOST, FOUND, MISSING
- ANIMAL COMPLAINTS
- PROWLER
- OTHER VICE
- RECKLESS BURNING

What do we notice and what do we do about it?

- Liquor violations are most likely to occur in district K while district O is the most likely to call about traffic related issues
 - Decrease the number of liquor stores and promote more beneficial activities (service, environment, etc.) in district K
 - Add more road surveillance and station more officers near notoriously dangerous intersections in district O
- Burglaries are most likely to happen in district U
 - Improve home/store security systems (intrusion sensors, remote door lock, door bell camera, etc.)

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