Operation ICON

A Project Report Presented to the BJA

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Executive Summary

The purpose of this project was to create, implement, and evaluate a project that would reduce both violent crime, traffic collisions, and foster better relationships between the police department and the community in Kansas City, Kansas. The total amount of homicides increased from **22 in 2012 to 41 in 2017.** Drive by shootings nearly doubled in 2016 alone. Violent crime was on the rise in Kansas City, Kansas and something had to be done to stop the violence.

During this time, a policy change occurred that limited an officer's ability to pursue suspects in vehicles for crimes other than a violent felony. For example, at that time if an officer attempted to conduct a vehicle stop for a traffic violation and the vehicle did not stop, by policy, officers terminated the enforcement action and the driver was simply allowed to flee. Subsequently, on numerous occasions officers were told by subjects that they knew the police would not pursuit them if they fled.

A problem analysis was conducted and three objectives were established: A review of archived statistical data on targeted crime in Kansas City, Kansas. Using geo-mapping a defined zone was identified to implement Project **ICON. The defined zone was to be implemented** by **November of 2018.** KCKPD implemented Project ICON (Impacting Crime on our neighborhood) with the goal of reducing violent crime by 10%.

The Project implemented zones to reduce crime in identified hot spots and was staffed off and on for a period of **three years until November of 2021.** The program consisted of strategically placing marked police cars in the defined zone which was shown to have the highest amount of violent crime. (Hot Spot Areas). Officers were instructed to conduct highly visible traffic enforcement efforts in this area and consider issuing warning tickets to drivers who

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committed minor traffic infractions. Four officers were assigned to proactively patrol in four Operation ICON micro-hot spot zones. The four officers were assigned to those zones four nights per week. This allowed for other officers on normal patrol duties to focus on handling dispatched calls for service. Further, officers on normal patrol duty could then focus their self-initiated proactive patrol work, when calls for service allowed, in other areas within their assigned area of patrol but outside of the zones. The data had by then been reviewed and indicated that violent crime was most prevalent Friday through Monday between 1800 hours and 0300 hours. Initially officers worked these zones over a 30-day period but the time period was later changed to a 60-day period after the COVID pandemic to better reflect crime trends in the observed data.

Data was then collected over this three-year period to see if the project was effective and showing positive results. For the purposes of this project the results were broken down pre-COVID pandemic and Post-COVID pandemic. The final results showed that objectives were met during the post-COVID time period. Post-COVID the objective of having a 10% reduction of violent crime was achieved, as the project led to a **19%** reduction in overall violent crime from the pre-COVID data set. The achievements of these objectives were met due to the training and dedication of the Kansas City, Kansas Police officers conducting traffic and community engagement in the defined ICON zones.

After starting the project, the majority of the ICON zones showed that with high visibility of law enforcement officers combined with community engagement an impact on violent crime could be achieved. Operation ICON has been an effort by the Kansas City, Kansas Police to deter crime and create greater visibility in small areas of the city that have been observed to have higher levels of crime. Through the deployment of additional officers and supervisors we have

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been able to create higher visibility to deter crime in these zones and create a higher perceived sense of safety for the citizens that live in those defined areas. An emphasis was placed on visibility through traffic enforcement, pedestrian checks, business checks and residential checks. Officers working the initiative were encouraged to interact with the public, foster positive relationships, and check on businesses and residences in the assigned zones. Their activity and interaction with the public was documented by the officers and supervisors involved through photographs taken and subsequently published on the Kansas City, Kansas Police Department's official social media accounts. Examples of these photos ranged from officers meeting and playing with children, helping stranded motorists, to arresting violent offenders. The use of photographs and anecdotes was intended to elevate the awareness by citizens of Kansas City, Kansas that did not live in the zones and would not be able to see the actions of the officers involved firsthand.

Operation ICON had been successful in identifying and addressing hot spot areas quickly based on recent crime data. ICON Zones were selected for sixty-day periods. These zones were regularly evaluated and were moved if crime was observed to decline in a zone or if crime was observed to increase in other areas of the city. ICON Zones would also remain in the same location to address continued elevated levels of crime, if needed. See figure 7 for a map of Wyandotte County and all the ICON zones that were established during the project period.

The findings of this project support the authors' research that the most effective way to reduce violent crime in Kansas City, Kansas was by having officers conduct highly visible traffic enforcement while working hand in hand with the community for positive citizen contact and interactions to combat crime.

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Table of Contents

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Targeted Problem
Nature and Extent of the Problem

The City of Kansas City, Kansas has a population of 151,709 (U.S. Census Bureau, 2016). The city had experienced a significant increase in violent crimes between 2013 and 2017. Overall violent crime totals during those years had risen from 900 incidents in 2013 to 1450 incidents in 2017. That equated to a 61% increase in violent crime. Homicides had increased from 29 in 2013 to 41 in 2017, with a spike of 47 in 2016. In 2016, Kansas City, Kansas showed homicides evaluated on a per-capita basis to be 31 homicides per 100,000 in population (Vaupel, 2017). In comparison, Chicago, Illinois showed 27.7 homicides per 100,000 in population (Sanburn and Johnson, 2017). Aggravated assaults and aggravated batteries had increased from 380 incidents in 2013 to 682 incidents in 2017. Separate from the aggravated batteries and aggravated assaults were shootings into dwellings and vehicles, which were recorded and under a different state statute. In 2013, 149 incidents were reported in which either a dwelling or a vehicle was shot into with a firearm. That number rose to 345 incidents in 2017. That was a 131% increase in incidents in which either a dwelling or a vehicle was shot into with a firearm. In 2016, the national rate for violent crime per 100,000 residents was 386 incidents (FBI, 2017). The City of Kansas City, Kansas had a rate of violent crime of 644 incidents (KBI, 2017) per 100,000 residents. Recent in-house analysis of the locations of the violent crime indicated that in 2017, 63% of all violent crime was committed within a 20 square mile geographic region of Kansas City, Kansas. The city encompasses approximately 123 square miles in totality. Therefore, 63% of the violent crime in the city was committed within approximately 16% of the city's land mass. This majority of violent crime in the city overwhelmingly affected the economically disadvantaged. Additionally, Wyandotte County, the county in which Kansas

City, KS is located, has no majority ethnic group. The county contained three demographics that are each near or above 25% of the total population. Those are African-Americans (24.2%), Hispanics (29.6%), and non-Hispanic whites (38.6%). Violent crime truly affected many people from different backgrounds in Kansas City, Kansas. A 2017 study of uniform crime numbers indicated that Kansas City had the 21st highest murder rate in the country. The Kansas City, Kansas Police Department obviously viewed the statistics and coinciding rise in violent crime as unacceptable. The social and economic benefits of a safe city were not fully present in Kansas City, Kansas. The risk to the community was increased due to the violent crime. The social benefits that arise in safe cities were not present in the areas within the city that were affected the most by the violent crime. The community was not able to take advantage of simple leisure activities that most communities have access to, due to the fear of being criminally victimized. Accordingly, those that live outside of the city often have the perception that the city was unsafe in its urban core area. Furthermore, population growth was stunted within the city and businesses had difficulty in recruiting talented workers into the workforce. This in turn led to a less healthy community overall. The economic benefits that are void due to the lack of investment in violent crime areas was readily apparent as well. Economic prosperity had not occurred in the urban core of the city, as compared to its western edge. As a result, commercial and retail development had lagged. Subsequently, fewer employment opportunities exist in the urban core. Ultimately, the department viewed the violent crime problem as more than just a crime problem. It was an entire community's welfare that was at stake. Therefore, the department's primary role in addressing this rise in violent crime was to find acceptable methods and strategies in which to deploy limited resources in order to curb this rise in violent crime and allow the community to take advantage of those economic and social benefits.

Understanding the Problem and Literature Review

The violent crime problem was identified from the department's records management system. The records management system was the repository for criminal offense reports that tabulated the crime data in the city. Annual reports were formulated from the data in the records management system. A comparison of the annual crime reports for the previous five-year period was conducted. The data illustrated the rise of the violent crime in the city. Choropleth maps were also utilized to determine the specific locations within the city that had the most incidents of reported violent crime. All data used was collected from the records management system in order to identify the violent crime locations.

In accordance with the "Koper Curve" theory, officers performed random in location and otherwise intermittent patrols of the Operation ICON zones. The patrols would last approximately 10-16 minutes. Once the time and/or high-visibility activity has elapsed, the officers moved to one of the other active zones. The officers would again then and there perform some other high-visibility activity. This activity utilized a dedicated patrol squad performing traffic enforcement and reasonable suspicion pedestrian checks. Further, once purchased with outside funding, License Plate Readers (LPRs) were utilized by officers on patrol in the zones to assist in locating stolen vehicles and wanted fugitives. Stolen vehicles are believed to be used to a great degree in the commission of violent crimes in Kansas City, Kansas. Additionally, officers engaged the community during business checks and consensual citizen contacts. These activities continued until all four zones had been patrolled. Once all four zones had been patrolled, the officers would repeat the process but not in any repetitive pattern. They continued this random and intermittent patrolling of the zones for their shift. High-visibility activity, including traffic enforcement, was a known deterrent to criminal activity in those areas. (Hegarty

et al. 2014). According to Koper (1995), the likelihood of crime or disorder within 30 minutes after a patrol visit was 15%; for stops of 10-16 minutes, the likelihood was reduced to 4%, causing deterrence to "peak." Additionally, the evidence-based theory of the Koper Curve was one outcome of the Sacramento Police Department's experiment on hot spot policing (Telp, C., Mitchell, R. & Weisberg, D. 2014).

David Weisburd and Cody Telep conducted a study on the efficiency of place-based policing. The study also cited Anthony Braga and showed that Braga found that seven out of nine experimental hot spot studies showed a substantial reduction in crime. (Weisburd, & Telep, 2015). The hot spots were place-based locations. The research conducted by Weisburd and Telep showed that placed-based policing was best for three reasons. The first was that the research showed that high crime tends to be concentrated in small locations and therefore easier for police to be focused and more effective. Second, the crimes occurring in these spots seemed to be more consistent than the actual offenders committing the crimes. In other words, some offenders would leave, but other offenders would come into that area. Therefore, it made more sense to target a location rather than the offenders themselves because it was easier to track down the offenders at a specific location. Third, the research also showed that the misconception that there will be crime displacement was incorrect and that place-based policing would likely lead to a diffusion of benefits other than displacement. Lastly, Braga, & Weisburd, (2015) also showed that policing in hot spots would likely cause a diffusion of benefits to the areas around the hot spots.

Community Outreach and Collaboration

Project ICON was designed to work in conjunction with DDACTS (Data Driven Approaches to Crime and Traffic Safety). The DDACTS zone was a 1.2 square mile area that

showed to have the most violent crime over the previous five years. It was also an ongoing project and not considered a “hot spot” area for this study. During Operation ICON data was also collected from the DDACTS zone but it did not overlap the ICON zones which were temporary.

The other key component of ICON was to have KCKPD officers partner with community stakeholders such as residents, businesses, and visitors to reduce the fear of crime and bring back a overall sense of safety to the neighborhoods in that area. By providing this area with a long-term and intensified police presence, it would help the community and the police department to reduce bad behavior and restore safety.

Prior to the launch of ICON, the police department made public announcements and explained the program by attending community watch group meetings, advertising through our social media sites, and passing the word around about the intended purpose of the program. Officers went to businesses within the city and informed them that they would be seeing more police presence in the area. It was made very clear that this was not a money generating program to write the community a large amount of tickets that they could not afford. Further, this was not intended to be an immigration enforcement action either. These messages were conveyed in a way to let the community, schools, and businesses understand that ICON was about community engagement and being highly visible in the neighborhoods to deter crime.

Incidentally, in one ICON area which became a hot spot due to the amount of violent crime taking place there was a business on the corner of 34th Street and Argentine Boulevard. The business owner approached our officers while they were on ICON patrol and told them that they were scaring off his customers. He insisted on speaking with a supervisor. One of the commanders that helped organize ICON arrived and explained to the business owner that the intent was not to scare away his customers but they were conducting a crime reduction initiative

in order to be highly visible to citizens in the area. The following week officers were not as visible there to show to the business owner that they were not targeting his customers. By happenstance that same week officers were called to the same business on a shooting that had occurred inside his business. The same commander that had spoken with the business owner about the ICON officers responded on the call. The commander politely told the business owner that this type of activity was exactly the reason why officers were being visible in the area.

Prior to the launch commanders attended roll calls and to all the specialized units to explain what the ICON initiative was going to be, when it was going to start, and who was going to be involved. Officers were encouraged that this was not a statistic driven assignment such as how many arrests could possibly be made. The goal was being highly visible with community engagement component so officers would have positive citizen contacts inside the community that was identified as an ICON zone. Officers working ICON were advised that all the hours worked would be on overtime in addition to their eight-hour work day. Additionally, officers were given specific directions on what needed to happen and in which manner. The success of ICON depended upon officers being motivated to accomplish the goals of the project. Examples were given to the officers of what the DDACTS results had been and how it reduced crime. It was believed that ICON would have the same impact except that the department would concentrate on hot spots in different areas of the city. Additionally, ICON also encompassed Community Policing concepts as well as addressed blight issues in the zones. The project was designed to be transparent with the community as well as have community involvement.

Strategies Employed

In an effort to enhance safety, KCKPD deployed more officers into ICON zones during the peak hours that crime was occurring according to our data. As research had shown

previously cited, when police are highly visible and are deployed in hot spots while given specific assignments within those spots, the combination of both showed to be the most effective in reducing crime as well as crashes. In 2020 the pandemic caused a policy change which resulted in officers riding alone in patrol vehicles. Further, ICON was also suspended in April of 2020 because of the COVID pandemic. The Department was doing very little self-initiated contact with the public as it was uncertain how the pandemic would impact our department. Several officers were on COVID leave for a year and thus the department lacked the staffing to sustain ICON while maintaining its normal daily operations. ICON resumed on July 15th 2020 and ran for 45 days to increase time spent in each ICON zone to aid in accurately capturing data. After a short trial period the timeframe was increased to 60 days in each zone. This provided a more accurate picture of the data and when a hot spot developed in a given area. A longer timeframe in an ICON zone not only allowed the department to be more effective in reducing crime further it allowed us to capture a better snap shot of the hot spot areas.

In the beginning of the project the officers working ICON were assigned to the on-duty supervisor who was working in that area and were not assigned solely to an ICON-specific supervisor. In 2021, the department began allowing sergeants participating in the ICON project to both improve supervision and to work with the officers in the ICON zone. The department discovered this to be very beneficial to hold officers more accountable during their ICON shift. The sergeants gave officers assignments within different zones for better visibility and community engagement.

Officers were encouraged to conduct highly visible traffic enforcement and had the option of issuing warning citations. This built goodwill with the public to show that officers were not there to generate revenue but to enforce traffic laws in a manner which enhanced public

safety. The project was designed so that all officers department-wide will have a turn during their shift to spend some time in the ICON zones. The motorcycle unit was comprised of ten officers and two sergeants divided between two shifts. They conducted traffic enforcement focused during the peak hours when accidents were occurring. The Special Operations Unit (SWAT) had a staff of ten officers and two sergeants deployed during the~~ir~~ working hours of 6pm to 2am, as well as those times that the data showed to be the peak hours of violent crime. The Community Policing Unit worked hand-in-hand with community watch groups in a specific area while also addressing code and/or blight issues in the area. Then a PowerPoint presentation was put out department-wide illustrating how ICON would work. It was summarized so that officers understood the mission. An example of the instructions follows (Edited for clarity):

- Staffing- *Captain Grasela will be the P.O.C. (Point of Contact)*
    - On-duty Afternoons and midnight patrolmen from ALL divisions will be offered the overtime based on seniority.
        - If we do not have volunteers for the overtime: Two patrolmen (two patrolmen from the two stations on your assigned day) will be held over from the afternoon shift and then again two patrolmen will be called in early from the midnight shift.
        - Sergeants this will be done in advance so there is no confusion who is working and we do not run into the problem of officers not answering the phone to come in early.

Primary hours of operation:

- Friday- two South (1830-2230 hours), two Midtown officers (1845-2245 hours)
- Friday- two South (2245-0245 hours), two Midtown officers (2300-0300 hours)

- Saturday- two East (1800-2200 hours), two West officers (1815-2215 hours)
- Saturday- two East (2215-0215 hours), two West officers (2230-0230 hours)
- Sunday- two South (1830-2230 hours), two Midtown officers (1845-2245 hours)
- Sunday- two South (2245-0245 hours), two Midtown officers (2300-0300 hours)
- Monday- two East (1800-2200 hours), two West officers (1815-2215 hours)
- Monday- two East (2215-0215 hours), two West officers (2230-0230 hours)

- Station sergeants will communicate directly with Captain Grasela and they will be responsible for ensuring the overtime positions are properly staffed.
- Four ICON zones are established, typically one in each of the KCKPD's four stations. There are sometimes two in one station, depending on needs suggested by the data.
- Zones are active for 60 days and then new zones established.
- Officers at the patrol stations are offered overtime by seniority and sign up each preceding month. A separate slide is included below that details the sign-up procedure.
- Current crime data for each ICON zone are published for officers to review prior to zones being established and enforcement undertaken.
- Officer's move from zone to zone only; doing a police function that is highly visible with emergency lights on for the public to see. (i.e. traffic stops, pedestrian checks, business checks, residence checks…etc.)
- Officers should NOT spend more than 15-20 minutes on average during an enforcement action inside each zone- in short, keep moving zone to zone. <u>But do something in each zone!</u>

- Officers are not subject to calls for service. This is **proactive** patrol work. That being said, if officers are in an ICON zone and an in-progress call or a hot call comes out, they can and should respond.
- Dispatch should not pull an ICON car from one station to another just to handle an in-progress call for service in an ICON zone. The ICON car works in conjunction with the other district cars already on duty, but the ICON car is primarily for proactive work. If the ICON car happens to be in a zone when a hot call comes out, that is fine. If not, district cars should handle it.
- While in ICON zones, officers should focus primarily on violent crime and/or the current crime trends in that zone. Obviously, all laws and constitutional rights concerning firearms and searches/seizures must be adhered to.
- The ICON officers will request assistance from the Sgt. that is currently working ICON. (tow approval, pursuits, defensive action…etc.)
- Officers must take overtime pay in cash and **not** compensatory time.
- No lunch breaks are permitted. However, you are encouraged to do business checks and stop in to get a drink or coffee.
- Officers working ICON should be heard doing self-initiated calls and not just driving around for four hours.
- The key to the success of ICON is being highly visible with positive citizen community engagement!
- Yes, you are allowed to patrol 3 to 4 blocks outside the zone!
- ICON photos: Every shift will take at least one ICON photo and send to the Public Information Officer via email.

- ICON photos should show community engagement activities and be creative.

After the COVID pandemic, KCKPD made an ICON door hanger (Figure 1). The purpose of this door hanger was for two reasons. It explained what project ICON was and why there was an increased police presence in their neighborhood. It also had information about resources on the reverse such as numbers to various organizations that citizens of that community might have found to be of assistance. Officers passed out the door hangers to citizens and also left the door hanger on businesses that had been closed at night and on weekends so that they knew a KCKPD officer had stopped by and checked on it. While officers were present, they were encouraged to turn on their overhead hazard lights so that they could be seen by the community. The exact number of door hangers that were handed out were not counted.

Figure 1. ICON Door Hanger

Officers were also encouraged to take photos of them leaving the door hangers and engaging with the community. Officers stopped at businesses in the ICON zone, introduced themselves, and checked on the business. On several occasions, officers saw families outside having a BBQ and stopped by. Other times, they saw kids playing in the street and stopped to engage them by having a conversation or playing with them. Sometimes they even danced with them. They took photographs of this community engagement and sent them to our Public Information Officer. The department Public Information Officer sent the photographs out on

social media showing ICON officers in the zones engaging with the community. One Sergeant came up with the idea of giving stickers to kids. When officers were working the ICON zone saw kids out playing, they stopped and handed out ICON stickers with the ICON logo. This made the police interaction a friendly one that made kids feel comfortable with the police and also got them accustomed to seeing police in the neighborhood.

The ICON zones were chosen initially by looking at the data showing all violent crimes over the past 30-day period. As discussed previously, over the course of the project, the durations increased from a 30-day period to a 45-day period, and then eventually to a 60-day period. Once the hot spots were established, every 60 days an ICON zone was formed to address the hot spot areas within the zone. Every 60 days the department sent the new hot spot data out to the entire department and informed them where the new hot spots and ICON zones were located. All other officers throughout the city were encouraged to drive through the ICON zone on their way to and from police headquarters or the county jail to drop off arrestees. As research has shown that the author cited, when police are highly visible and are deployed in hot spots and given specific assignments within those spots, the combination of both showed to be the most effective in reducing crime and crashes.

Data and Intelligence

Development of Data and Intelligence SPI throughout the Initiative

Each zone was created by first assessing calls for service quantities using a hotspot map created inside our New World Dashboard. From there a polygon layer was created in Arc GIS pro. After a waiting period of two weeks from the close of each cycle, calls for service data and case data were pulled and imported into Arc GIS Pro to be processed. Our ICON Cycle was as

followed: Identify, Create Zones, Increase Police presence in Zones, Collect and Analyze Data, Report and Distribute our Findings.

How Data and Intelligence was Used

As mentioned before under strategies employed, by looking and comparing the data we went from a 30-day ICON period to a 60-day ICON period. Both our crime analyst as well as our research partner agreed that to truly capture the hot spots in a given area a larger data set timeframe was needed. A 30-day period was not sufficient. This also provided a better perspective of how much the crime had increased or decreased due to the longer timeframe which lowered the volatility in the data.

After each cycle a report was put together detailing the calls for service and case crime statistics for each zone. Also included were the citywide statistics for the period while the zone was active and the same amount of time before the zone was active. This report went out department wide with the week's crime strategy statistics. One challenge to the collection of data of was the new Aggravated Domestic Statute which went into effect on July 1st 2017. Prior to that, the department had used the existing aggravated battery statute if the strangulation had been severe enough to cause something documentable (i.e. urination, raspy breathing, petechiae, etc.) Whereas, with the new statute any strangulation, however slight, would be considered a felony. Therefore, post July 1st 2017 it appeared in the data that our overall violent crime rate went up compared to the pre-July 1st 2017 time period.

Analysis and Evaluation

Role of the Research Partner

Our research partner is the University of Georgia Statistical Consulting Center, led by Dr. Jaxk H. Reeves, an Associate Professor and Dr. XianYan Chen, the Associate Director of the SCC. Their team had three main contributions to this project: (a) Creation of a crime index that could measure total crime more carefully than traditional measures, (b) Development of a tool to identify 'Hot-Spot' locations for future ICON zones, and (c) Statistical analysis of the effect of ICON zones on crime rates. Each of these contributions is discussed briefly below.

(a) Creation of Crime Index

The SCC team created a crime index that was used to analyze our ICON zones. A crime ranking system was created (Figure 10) that evaluated each crime by severity. Initially the research partners created five different Indices, I0 – I4, which aimed to aggregate and summarize the multiple data points. Index 0 was the most naïve index that counted every violation as a 'crime' of equal severity. Other indices gave more weights to violent crimes that are relatively rare, but almost none to more common crimes. Using the various indexes, the SCC team ultimately settled on Index 4 as the one which seemed the best measure of total crime. The relative point values for Index 4 are shown in the last column of Figure 10, ranging from 16 for Homicide to 5 for the least serious types of violent crimes, with values of 1-4 for non-violent crimes and zero for offenses that aren't really crimes. To create the true normalized index (hpm4), one must sum all crimes committed during a period (weighted by the Index 4-point value) and then normalize for population density and duration of observation. The values reported as hpm4 at the bottom of Figure 10 are in units of hundred persons per (30-day) month. Thus, for the 5 years 2014-2015 to 2018-2019 the index varied from 2.561 to 2.989, with a mean of 2.818. This means, for the city

as a whole, in a one-month period, for 100 people, about 2.81 crimes would be encountered. Of course, these are averages for the city as a whole. If one examines the 19 different sub-stations in the city, one would find that average crime is very low (below 2.00) for sub-stations in the Western part of the city, but much higher in others, with the worst being substation 111 in the East district and substation 331 in the South district, both with normalized indices near or over 6.00 over the 5-year pre-ICON period. Individual neighborhoods within some of these sub-stations could be even higher, although one must be careful when calculating such indices over an area which has a small number of people or over a duration which is too short, as one or two violent crimes (or lack thereof) can cause drastic fluctuations in the index.

(b) Development of Tool to Identify Potential Hot-Spots for Future ICON Zones

To help KCKPD identify neighborhoods within a sub-station to consider for ICON zones, the UGA SCC developed a grid-search procedure which examined about 400 rectangular areas within each sub-station's area to determine which small neighborhoods in the sub-station area had historically high Index4 values. This search procedure was moderately good at identifying general neighborhoods in which to deploy ICON zones, but wasn't used much by KCKPD. For one reason, many of the suggestions were somewhat obvious – KCKPD already had a fairly good idea of where the high-crime zones were located, and knew, from professional experience, what street boundaries were more useful for delineating zones. Secondly, for the UGA SCC method to work well, it needed a lot of data, such as the complete 5-year crime history for a small area. If one tried to make real-time changes based on what had happened in the last month or so, the data were too erratic to be useful in the procedure developed by UGA SCC.

(c) **Statistical Analysis of the Effects of ICON Zones on Crime Rates**

As noted elsewhere, the ICON plan began in July 2019. Originally, the plan was to have four ICON zones (one in each of the four stations [East, South, West, Midtown] of KCKPD), and to rotate the zones about once per month. However, as time went on, the durations between changes went from about 30 days to 45 days to 60 days. In addition, it was quickly determined that there was little value in putting an ICON zone anywhere within the Western station, as there was really no neighborhood there that had much crime, so as time went on, there were usually one ICON zone in Midtown and either one or two in South and East. Finally, there were a few neighborhoods where the crime rate seemed so high (even if ICON was successful) that the KCKPD didn't want to remove ICON presence, so these rarely, if ever, rotated out of use. In 2019, there were 5 time periods in which ICON was implemented, each lasting about 30 days. Overall, in 2019, there were 14 distinct ICON zones, with 12 lasting about 30 days and 2 lasting 122 days. In 2020, there were three periods of 45-58 days, with 11 total ICON zones; 7 lasting 45-48 days, 3 lasting for 58 days, and 1 lasting 103 days. Finally, in 2021, there were three periods of ~60 days, with 10 unique ICON zones. Nine of these lasted 60 days, and one last 184 days. Figure 11 shows data for all of these ICON zones over the three-year period. Because of their different durations and population densities, the relevant comparison metric is the hpm4 value shown in red the last column of Figure 11.

It is worth noting that ICON zone "ICZS1" for the time period July 5-July 31, 2019 is an outlier. This is partly due to the small population size (n=163 people) and to the fact that it was active for only 27 days. So, while there were only six total crimes, the severity of crimes compared to the days and small population created the very high hpm4 index of 20.765.

Using the hpm4 index which the UGA SCC team provided, the populations, and the crime totals, the following analysis was created. In Figure 12, it is shown that in 2019 the total in-zone crime rate for the total zones was 242 per 10,000 for a total of 271 days of zone activity. This was compared to 734 per 10,000 city-wide for the entire year. The total zones for 2019 made up 6% of the population and the crime that occurred while the department was active in the zones was 1.9% of the annual total.

In 2020 the total in-zone crime rate for the total zones was 248 per 10,000 for a total of 151 days of zone activity. This was compared to 768 per 10,000 city-wide for the entire year. The total zones for 2020 made up 8% of the population and the crime that occurred while the department active in the zones was 2.5% of the annual total.

In 2021, the total in-zone crime rate for the total zones was 196 per 10,000 for a total of 184 days of zone activity. This was compared to 834 per 10,000 city-wide for the entire year. The total zones for 2021 made up 13% of the population and the crime that occurred while the department was active in the zones was 3.0% of the annual total. The index crime number was also used to calculate a crime rate, and this rate for 2019 in zone total was 101, for 2020 was 66 and 2021 was 21.

Results and the Impact SPI had on the Crime Problem

ICON took place in two phases-the first was from July 5, 2019 through November 30, 2019 and the second was from July 15, 2020 through August 13, 2021 with a brief break during December/January. Over the course of the two phases there were a total of 33 individual zones, some of which were used for multiple cycles. Time spent in these zone ranged from 27 days to 64 days, with one zone having a total of 335 days during six cycles spanning from July 15, 2020 through August 13, 2021.

During the seven-month break in the ICON operation, the department saw a rise in crime which was likely due to other events as it was difficult to directly attribute the impact of the lack of ICON operation activity to the rise other than to say that once ICON was back in effect numbers decreased. The annual total for violent crime declined (see appendix figure 1), in 2018 there was a decrease of 8.5% in overall violent crime, with homicides decreasing by 14.6%. From 2019 – 2021 violent crimes continually increased by 3.6% in 2019, 15.6% in 2020, and 7.3% in 2021 along with homicides which increased by 11.4% in 2019, 48.7% in 2020, and decreased by 12.07% in 2021. Property crimes decreased by 8.8% in 2018 and continued to decrease 6.2% in 2019, they increased in 2020 by 10.3% and then decreased by 0.5% in 2021. When the data was isolated for November 2018 – November 2021 (see appendix figure 3) and compared January – November 2020 to January – November 2019 violent crimes increased by 14%, homicides by 73%, and property crimes by 10%. Comparing January – November 2021 to January – November 2020 violent crimes decreased by 19%, homicides by 4%, and property crimes increased by 2%.

An in depth analyst was completed on two zones, the first zone as seen in figure 5, is in the Armourdale neighborhood of Kansas City, Kansas. The titled of this zone SPS (South Patrol Station) or SPS2 zone. This ICON zone was initiated on September 1st, 2020 and was active for a total of 5 zones the last active zone was active until August 13th, 2021. The data collected for this analysis is from September 21, 2019 to July 25, 2022. This analysis looked at three time periods “In-zone time” which is the total combines dates of all 5 individual zone September 1, 2020 – August 13, 2021, a total of 346 days. The second time period was “Prior to in-zone activity” which was 346 days prior to September 1, 2020, (9-21-19 – 8-31-20). Then “Post in-zone activity”, 346 days after August 13, 2021, (8-14-20 – 7-25-22.) When comparing In-zone

numbers to prior to in-zone activity number for target crime types it was determined that violent crime increased by 17% with a full reduction of homicides. Property crime increased by 45% with a total target crime having a 41% increase. When Post in-zone activity was compared to In-zone activity the results were, total violent crime was reduced by 43%, property crime was reduced by 13%, and overall target crime was reduced by 17%.

The second ICON zone that had an in-depth analyst conducted is seen in figure 6 in the appendix. This zone is in the north central part of the county in our then Midtown Patrol Station. This zone is titled MPS 4/2 (Midtown Patrol Station April 2, 2021 – May 31, 2021). The In-zone active time for this zone was 59 days, so the "Prior to in-zone activity" was for (2-2-21 – 4-1-21) and the "Post in-zone activity", (6-1-21 – 7-29-21). With this zone there was a reduction of violent crime by 78%, property crime increased during our In-zone time by 56%, and overall target crime was reduced by 11%. When comparing Post in-zone to In-zone there was no change in violent crime numbers, property crime was reduced by 36%, and over target crime was reduced by 31%.

Integration and Sustainability

Changes to Policy or Practice in the Department

After conducting the research and analyzing the data from Operation ICON, it was recommended that the police department continue ICON for a period of one year extending the project to December 2022. At the end of the one year period, it was recommended that the statistical data should be analyzed over the last year to see if the project needed to continue another six months or if the defined area of the zone needed to be moved to another location that would be better served.

It was the author's recommendation that the Kansas City, Kansas Police Department increase its traffic unit by adding more traffic cars to each division for the sole purpose of traffic enforcement and visibility. The Department currently had a traffic enforcement unit which had a day and evening shift that mainly patrolled on police motorcycles in areas where citizen made complaints of traffic violators and not high crime areas or hot spots. The traffic unit currently staffed only five officers city-wide for the day shift and five officers city-wide for an afternoon shift with a sergeant supervising each shift. Adding traffic enforcement units to divisions which had the highest crime would reduce crime as well as reduce the amount of accidents that occur in that area. Adding additional traffic enforcement cars to the divisions that need them, will also allow regular patrol officers in those divisions to concentrate on answering calls for service during those peak times. The unit's hours should be during the peak times of crime and accidents. Another recommendation would be to concentrate the efforts of traffic enforcement in only the hot spot areas of violent crime during the hours that they are occurring. The data had shown this to be between 4pm and midnight. The traffic enforcement unit should work in conjunction with the community policing unit to address the issues in those hot spot areas and create positive community engagement.

Organizational changes, Developments, or Adjustments

Due to staffing shortages, our department went from four stations down to three stations. The department realized that if it ever did another crime reduction effort that it would need the staffing to sustain it. Current staffing would have been inadequate to attempt to staff four divisions. The department currently has 333 sworn officers and should be at 369. The department has had a budget for 369 officers for the last 25 years and has never been fully staffed.

Sustaining Outcomes

The department has currently applied and been accepted for another grant that would give the department an additional 12 Officers. With the decline of qualified applicants, it has been very difficult to recruit and retain officers. This, however, has not been a problem isolated to our city but an issue facing departments across the nation. With these 12 additional officers, the Kansas City, Kansas Police Department would place four officers in each station who would be neighborhood impact squads. These squads would serve two purposes. Responding to violent crimes in designated ICON zones where the data showed hot spots to be located and they would be used for community engagement within those neighborhoods to be highly visible and have positive citizen contact. They would also conduct follow ups with citizens to assist detectives in locating possible suspects.

Summary and Conclusion

Outcomes and Organizational and Community Impacts

The ICON program definitely made an impact in our community. It showed that the department cared when it came to protecting the citizens of the city from violent crime. It turned our department into more of a community policing department than just having a community policing unit. All units and members of the department were engaged and even though they did not all actually work on ICON, they still had buy-in as to what the organization was trying to accomplish.

With that said, the department created and distributed ICON coins as a token of gratitude to the officers and sergeants who participated in at least one shift of ICON Patrol. The department also distributed coins to civilian staff who had assisted with the program (crime analyst, PIO, etc.) as well as our research partners and members of the team. The design of the coin was created by a spouse of a commander who was attached to the program and featured the

ICON logo prominently in color on the obverse surrounded by the department's core values of Service, Honor, Integrity, and Professionalism. The reverse of the coin displayed a KCKPD patrol car with equipment carried by officers while on patrol including a handgun, wooden baton, handcuffs and flashlight. Behind the patrol vehicle, the coin displays the skyline of Kansas City, KS.

Lessons Learned

One of the lessons learned on the project was that there needed to be at least one person steering the ship for the program. During leadership changes sometimes the ICON project did not get as much attention as it needed. Officers became complacent at times. One reason for this was the lack of staffing and the extra staffing needed for the project. Officers became burnt out because of working all the overtime hours, so the department needed to give a 30-day break for them to "recharge" and start fresh again. Overtime fatigue was probably one of the greatest issues and at times staffing went short on ICON officers because the department did not have enough people working to staff it. Convincing the sergeants of ICON's usefulness greatly helped the initiative, as the sergeants were in charge of assigning officers to the established ICON zones.

Winter months were slow and the author was not sure how that impacted our data. The department switched the hours of ICON more in the manner of an afternoon shift (2pm to 10pm) due to weather conditions and daylight savings time. Further, the department suspended ICON during January and February for this reason.

The department key core members were Major Owen, Captain Grasela, Analyst Kate Beals and Dr. Jaxk Reeves and Dr. XianYan Chen (University of Georgia) who along with the BJA team would meet once a month and discuss the progress of what had been done over the last

30 days and what was intended on being done moving forward with the program. The author found it very helpful to discuss things and have constructive dialog with the team. The team was able to give an insight on lessons learned and give guidance on how the department was headed in the right direction. The BJA team was able to provide examples of different cities and how they ran their programs as well as critique how the program was running. They did a great job with answering questions in all aspects.

The entire project was a great experience. The author would only say that he would decrease the period of time to do the project. Officer retention and shortage of personnel put a strain on the department as it was difficult to keep up with staffing issues. The project was suspended in 2020 due to the COVID pandemic which also had an impact on the program when it was restarted in November of 2020. At the time the department still had officers absent for long periods of time and sick with COVID.

Another lesson learned was that during the entire SPI program the leadership changed position, were promoted, and even some retired. Assistant Chief Owen was able to take over as a Captain and stay with the program to its completion even though he was promoted to Assistant Chief. The experience taught that there needed to be a main person to steer the project.

Technical Assistance and Training

Technical Assistance was offered by the BJA however the department did not need to use any of the services provided other than the monthly scheduled group meetings which were able to provide the Kansas City Kansas Police Department with feedback on the ongoing project. BJA paid for two online training classes that Analyst Beals attended, one on the topics of hot spot mapping and one on crime stats for small jurisdictions, these classes were offered through the International Association of Crime Analysts. The project was also presented at the annual ESRI

User Conference in July of this year and was attended by approximately fifty people.

Recommendations for Further Research

The author recommends that further research be conducted on ICON zones with statistical data to see if the time spent in hot spot areas will show that ICON was a success. The information gained during the author's research was consistent with the results of ICON. The author also recommended that further research be conducted in hot spot areas city-wide which concentrated traffic and community engagement efforts conducted in those areas. This would show if the traffic enforcement and positive citizen contact caused a decrease in crime and eliminated the hot spots.

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Appendix

Figure 1 : KCKPD Violent Crime Stats 2015 - 2021				
Year	Violent Crime Total	Population Estimate	Crime Rate per 100,000	% Change from Previous Year
2015	949	150,370	631	
2016	1,278	151,709	842	33.48%
2017	1,464	152,573	960	13.91%
2018	1,340	153,468	873	-9.00%
2019	1,388	153,601	904	3.49%
2020	1,605	168,873	950	5.18%
2021	1,727	167,046	1,034	8.78%
KCKPD Property Crime Stats 2015 - 2021				
Year	Property Crime Total	Population Estimate	Crime Rate per 100,000	% Change from Previous Year
2015	7,274	150,370	4,837	
2016	7,389	151,709	4,871	4.9%
2017	7,369	152,573	4,830	14.6%
2018	6,724	153,468	4,381	-8.5%
2019	6,303	153,601	4,103	3.6%
2020	6,951	168,873	4,116	15.6%
2021	6,913	167,046	4,138	7.6%

Figure 2 : KCKPD Homicide Stats 2015 - 2021				
Year	Homicide Crime Total	Population estimate	Crime Rate per 100,000	% Change from Previous Year
2015	33	150,370	22	
2016	47	151,709	31	42.42%
2017	41	152,573	27	-12.77%
2018	35	153,468	23	-14.63%
2019	39	153,601	25	11.43%
2020	58	168,873	34	48.72%
2021	51	167,046	31	-12.07%

Figure 3 : KCKPD Aggravated Assault and Battery Stats 2015 - 2021				
Year	Agg. Assault/Battery Crime Total	Population Estimate	Crime Rate per 100,000	% Change from Previous Year
2015	561	150,370	373	
2016	624	151,709	411	13.40%
2017	727	152,573	476	17.12%
2018	635	153,468	414	-4.82%
2019	644	153,601	419	10.91%
2020	901	168,873	534	27.70%
2021	924	167,046	553	20.82%

Figure 4:

City Wide CASES	TOTAL Nov 1 2018 - Nov 30 2021	11-30-2019 01-01-2019	11-30-2020 01-01-2020	11-30-2021 01-01-2021	Line Chart	Jan Nov 2020 Compared to Jan - Nov 2019 % Difference	Jan Nov 2021 Compared to Jan - Nov 2020 % Difference
HOMICIDE	**114**	26	45	43		73%	-4%
RAPE	**281**	93	85	103		-9%	21%
AGG BATTERY	**1078**	325	333	420		2%	26%
AGG ASSAULT	**1453**	316	526	611		66%	16%
SHOOTING INTO DWELL/AUTO	***827***	***266***	***315***	***246***		18%	-22%
SHOOTING-OCC DWELL	**506**	168	188	150		12%	-20%
SHOOTING-OCC AUTO	**238**	62	101	75		63%	-26%
SHOOTING-UNOCC DWELL	**83**	36	26	21		-28%	-19%
ROBBERY	***91***	***34***	***26***	***31***		-24%	19%
AGG ROBBERY	**461**	178	152	131		-15%	-14%
ROBBERY	**91**	34	26	31		-24%	19%
TOTAL VIOLENT	**918**	300	341	277		14%	-19%
BURGLARY	***4819***	***1346***	***1729***	***1744***		28%	1%
BURGLARY-AGGRAVATED	**323**	102	104	117		2%	13%
BURGLARY-RES	**1192**	407	355	430		-13%	21%
BURGLARY-NONRES	**769**	216	266	287		23%	8%
BURGLARY-AUTO	**2535**	621	1004	910		62%	-9%
THEFT	**13630**	4373	4573	4684		5%	2%
TOTAL PROPERTY	**18449**	5719	6302	6428		10%	2%
TOTAL TARGET CRIMES	**19367**	6019	6643	6705		10%	1%

Figure 5:

SPS CASES (346 Days)	8/13/2022 9/21/2019	08-31-2020 09-21-2019	08-13-2021 09-01-2020	07-25-2022 08-14-2021	Line Chart	07/15/2020 - 8/13/2021 Compared to 09/01/2019 - 08/31/2020 % Difference	08/14/2021 - 08/13/2022 Compared to 09/01/2019 -08/31/2020 % Difference
HOMICIDE	3	3	**0**	0		-100%	
RAPE	2	0	**1**	1			0%
AGG BATTERY	12	2	**5**	5		150%	0%
AGG ASSAULT	23	6	**9**	8		50%	-11%
SHOOTING INTO DWELL/AUTO	17	***6***	**7**	***4***		17%	-43%
SHOOTING-OCC DWELL	12	5	**4**	3		-20%	-25%
SHOOTING-OCC AUTO	3	0	**2**	1			-50%
SHOOTING-UNOCC DWELL	2	1	**1**	0		0%	-100%
ROBBERY	***0***	0	**0**	0			
AGG ROBBERY	1	1	**0**	0		-100%	
ROBBERY	0	0	**0**	0			
TOTAL VIOLENT	57	17	**22**	18		29%	-18%
BURGLARY	***30***	***8***	**11**	***11***		38%	0%
BURGLARY-AGGRAVATED	3	2	**0**	1		-100%	
BURGLARY-RES	8	3	**2**	3		-33%	50%
BURGLARY-NONRES	2	1	**1**	0		0%	-100%
BURGLARY-AUTO	17	2	**8**	7		300%	-13%
THEFT	85	23	**34**	28		48%	-18%
TOTAL PROPERTY	115	31	**45**	39		45%	-13%
TOTAL TARGET CRIMES	172	48	**67**	57		40%	-15%

Figure 6:

MPS 4/2 CASES (59 Days)	7/29/2021 2/2/2021	04-01-2021 02-02-2021	05-31-2021 04-02-2021	07-29-2021 06-01-2021	Line Chart	04/02/2021 - 05/31/2021 Compared to 02/02/2021 - 04/01/2021 % Difference	06/01/2021 - 07/29/2022 Compared to 04/02/2021 - 05/31/2021 % Difference
HOMICIDE	0	0	**0**	0			
RAPE	1	1	**0**	0		-100%	
AGG BATTERY	3	2	**0**	1		-100%	
AGG ASSAULT	3	2	**0**	1		-100%	
SHOOTING INTO DWELL/AUTO	1	***0***	**1**	***0***			-100%
SHOOTING-OCC DWELL	0	0	**0**	0			
SHOOTING-OCC AUTO	0	0	**0**	0			
SHOOTING-UNOCC DWELL	1	0	**1**	0			-100%
ROBBERY	***5***	***4***	**1**	***0***		-75%	-100%
AGG ROBBERY	3	3	**0**	0		-100%	
ROBBERY	2	1	**1**	0		0%	-100%
TOTAL VIOLENT	13	9	**2**	2		-78%	0%
BURGLARY	***10***	***4***	**1**	***5***		-75%	400%
BURGLARY-AGGRAVATED	0	0	**0**	0			
BURGLARY-RES	5	3	**0**	2		-100%	
BURGLARY-NONRES	1	0	**0**	1			
BURGLARY-AUTO	4	1	**1**	2		0%	100%
THEFT	22	5	**13**	4		160%	-69%
TOTAL PROPERTY	32	9	**14**	9		56%	-36%
TOTAL TARGET CRIMES	45	13	**16**	11		-11%	-31%

Figure 7:

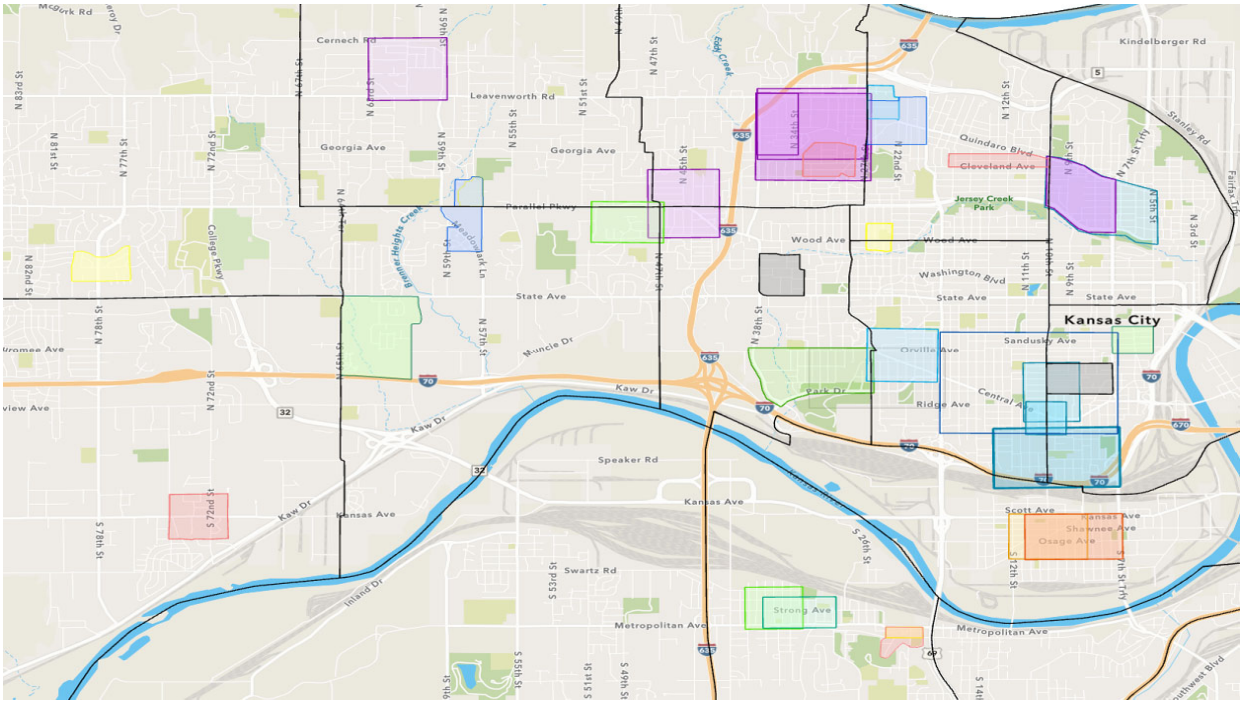

Figure 8:

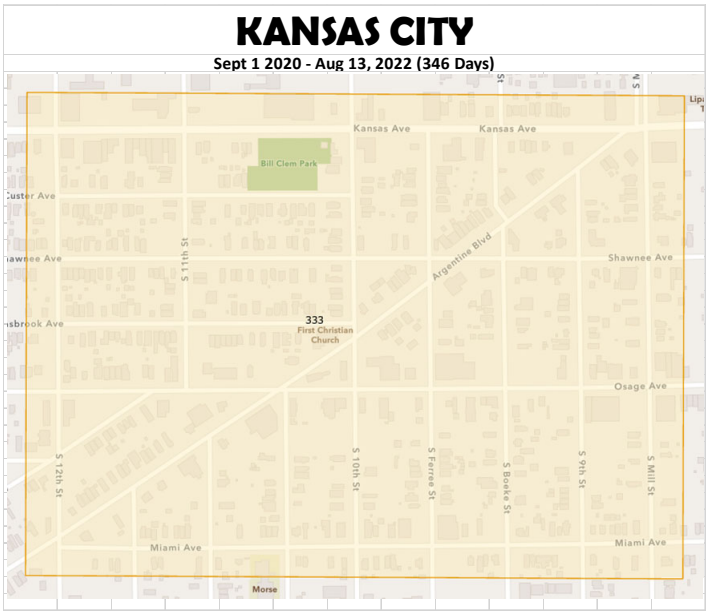

Figure 9:

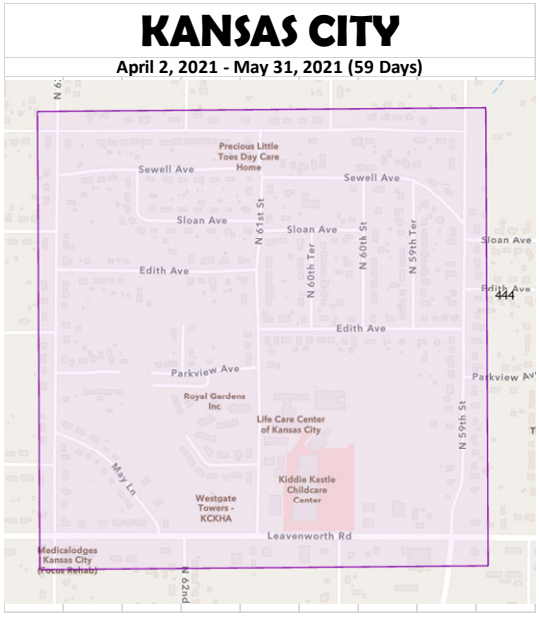

Figure 10:

Generalized Classification	Ranking	5Years	2014 to 2015	2015 to 2016	2016 to 2017	2017 to 2018	2018 to 2019	Index0	Index1	Index2	Index3	Index4
Homicide	1	165	26	30	45	37	27	1	2	38.00	8	16
Rape	2	502	101	111	94	103	93	1	2	19.00	7	14
Agg Battery	3	1345	220	212	254	329	330	1	2	12.67	7	14
Agg Assault	4	1660	280	330	354	366	330	1	2	9.50	7	14
Shooting-Occ Dwell	5	898	143	160	204	201	190	1	2	7.60	6	12
Shooting-Occ Auto	6	323	53	61	73	78	58	1	2	6.33	6	12
Agg Robbery	7	1118	240	248	195	236	199	1	2	5.43	5	10
Agg Arson	8	39	11	10	13	5	0	1	2	4.75	5	10
Shooting-Unocc Dwell	9	203	26	43	42	47	45	1	2	4.22	5	10
Robbery	10	253	51	41	64	48	49	1	2	3.80	5	10
Abduction	11	114	30	16	24	19	25	1	2	3.45	5	10
Child Abuse	12	192	38	34	45	29	46	1	2	3.17	5	10
Agg Sexual Battery	13	37	9	3	7	14	4	1	2	2.92	6	8
Agg Indec Liberties	14	359	77	76	74	76	56	1	2	2.71	6	8
Agg Sodomy	15	117	17	22	27	29	22	1	2	2.53	6	8
Burglary-Aggravated	16	692	165	153	128	132	114	1	2	2.38	4	6
Indecent Liberties	17	60	9	15	10	17	9	1	2	2.24	3	4
Agg Ind Solicitation	18	41	7	10	8	7	9	1	2	2.11	3	4
Domestic Battery	19	7430	1606	1573	1446	1396	1409	1	2	2.00	3	4
Battery	20	4840	1052	1047	918	914	909	1	2	1.90	2	2
Assault	21	1206	300	277	232	203	194	1	2	1.81	2	2
Sexual Battery	22	128	23	19	21	26	39	1	2	1.73	4	5
Sex Exploit of Child	23	38	6	8	9	3	12	1	2	1.65	4	5
Indecent Solicitation	24	13	3	3	0	4	3	1	1	1.58	4	5
Burglary-Res	25	3852	1200	899	633	642	478	1	1	1.52	4	6
Burglary-NonRes	26	1181	275	207	224	272	203	1	1	1.46	3	4
Burglary-Auto	27	4330	823	859	993	957	698	1	1	1.41	3	4
Criminal Restraint	28	100	22	20	13	18	27	1	1	1.36	2	2
Stalking	29	158	63	31	24	19	21	1	1	1.31	2	2
Criminal Threat	30	262	50	56	58	60	38	1	1	1.27	2	2
Sodomy	31	29	4	6	3	8	8	1	1	1.23	2	2
Arson	32	166	67	58	28	7	6	1	1	1.19	2	2
Criminal Damage	33	18132	4074	3712	3570	3697	3079	1	1	1.15	2	2
Drug Offense	34	5375	1378	1009	955	1024	1009	1	1	1.12	1	1
Fraud	35	2000	492	523	454	286	245	1	1	1.09	1	1
Forgery	36	774	172	160	161	147	134	1	1	1.06	1	1
Weapons Offense	37	907	126	121	107	213	340	1	1	1.03	1	1
Theft	38	26387	5509	5283	5284	5461	4850	1	1	1.00	1	1
Poss Stolen Property	39	80	0	2	25	29	24	1	1	0.97	1	1
Interf Parental Cust	40	69	28	18	9	9	5	1	1	0.95	1	1
Telecomm Harrasment	41	2066	454	478	447	390	297	1	1	0.93	1	1
Graffiti	42	242	49	36	40	50	67	1	1	0.90	1	1
Alcohol	43	27	2	1	1	4	19	1	1	0.88	1	1
Runaway	44	2215	469	479	429	428	410	1	0	0.86	0	0
Missing Person	45	618	129	115	114	131	129	1	0	0.84	0	0
Other	46	4289	668	663	567	747	1644	1	0	0.83	0	0
Warrant Arrest	47	121	0	1	19	21	80	1	0	0.81	0	0
Traffic	48	532	5	5	30	116	376	1	0	0.79	0	0
Dead Body	49	568	0	1	104	232	231	1	0	0.78	0	0
Casualty	50	460	0	0	89	202	169	1	0	0.76	0	0
Juvenile Contact	51	2392	4	11	303	867	1207	1	0	0.75	0	0
CINC	52	1572	831	741	0	0	0	1	0	0.73	0	0
?	53	239	31	21	104	42	41	1	0	0.72	0	0
TOTAL		100,916	21,418	20,018	19,075	20,398	20,007					
	Index0 hpm	1.103	1.171	1.094	1.043	1.115	1.094					
	Index1	1.199	1.299	1.229	1.181	1.199	1.087					
	Index2	1.977	2.001	1.952	1.946	2.055	1.933					
	Index3	2.095	2.264	2.136	2.071	2.123	1.881					
	Index4	2.818	2.989	2.852	2.798	2.885	2.566					

Figure 11:

Color	Name	District	SubSt	Period	Resdnc	Est Pop	Area(mi sq)	DaysAct	CHT	TARG	VIOL	ActInd0	ActInd1	ActInd2	ActInd3	ActInd4	hpm0	hpm1	hpm2	hpm3	hpm4
Yellow	ICZE1	East	113-114	July 5-July 31, 2019	86	234	0.04	27	**2**			2	1	1.91	1	1	0.966	0.483	0.922	0.483	0.483
Yellow	ICZW1	West	222	July 5-July 31, 2019	277	753	0.10	27	**10**			10	14	17.30	22	33	1.499	2.099	2.594	3.298	4.948
Yellow	ICZS1	South	331	July 5-July 31, 2019	60	163	0.02	27	**6**			6	8	21.16	17	30	4.153	5.537	14.646	11.767	20.765
Yellow	ICZM1	Midtown	444	July 5-July 31, 2019	131	356	0.04	27	**10**			10	14	15.75	25	30	3.170	4.438	4.993	7.926	9.511
Coral	ICZE2	East	113	August 1- Sept 4, 2019	225	612	0.13	35	**9**			9	8	18.01	14	21	1.282	1.139	2.564	1.993	2.990
Y/Coral	ICZW2	West	443	August 1- Nov. 30, 2019	273	742	0.17	122	**52**			52	59	133.01	117	174	1.752	1.988	4.481	3.942	5.863
Y/Coral	ICZS2	South	331	August 1- Nov. 30, 2019	174	473	0.06	122	**42**			42	58	157.43	142	236	2.220	3.066	8.321	7.505	12.474
Coral	ICZM2	Midtown	221	August 1- Sept 4, 2019	185	503	0.10	35	**13**			13	18	42.08	40	63	2.252	3.118	7.290	6.930	10.915
Blue	ICZE3	East	113	Sept. 5- Oct. 3, 2019	237	645	0.16	29	**11**			11	14	15.67	18	20	1.795	2.284	2.557	2.937	3.263
Blue	ICZM3	Midtown	441-444	Sept. 5- Oct. 3, 2019	316	860	0.14	29	**10**			10	11	13.43	18	21	1.224	1.346	1.643	2.203	2.570
Green	ICZE4	East	115	Oct. 4- Oct. 31, 2019	293	797	0.07	28	**10**			10	10	11.89	15	18	1.367	1.367	1.625	2.050	2.460
Green	ICZM4	Midtown	441	Oct. 4- Oct. 31, 2019	522	1420	0.39	28	**12**			12	10	13.63	14	15	0.921	0.767	1.046	1.074	1.151
Gray	ICZE5	East	115	Nov. 1- Nov. 30, 2019	276	751	0.13	30	**10**			10	15	57.43	28	43	1.354	2.031	7.775	3.791	5.821
Gray	ICZM5	Midtown	442	Nov. 1- Nov. 30, 2019	156	424	0.12	30	**14**			14	14	17.11	20	22	3.357	3.357	4.103	4.796	5.275
						8733.04		**271**	**211**												
Blue	11th	East	114-115	July 15-Aug. 31, 2020	251	683	0.07	48	**22**	**9**	**3**	22	32	58.44	52	77	2.047	2.977	5.437	4.838	7.164
Yellow	Kansas	South	333	July 15-Aug. 31, 2020	416	1133	0.24	48	**25**	**6**	**2**	25	31	45.46	46	60	1.402	1.739	2.550	2.580	3.365
Purple	Qui	East	111	July 15-Aug. 31, 2020	191	519	0.28	48	**20**	**12**	**8**	20	28	91.98	70	124	2.449	3.428	11.261	8.570	15.181
Green	47th	Midtown	441	July 15-Aug. 31, 2020	264	718	0.18	48	**17**	**9**	**3**	17	21	37.26	36	54	1.504	1.858	3.297	3.186	4.779
Blue	e1	East	114-115	Sept. 1-Oct. 15, 2020	687	1868	0.21	45	**37**	**17**	**5**	37	51	102.35	99	146	1.342	1.850	3.714	3.592	5.297
Green	s1	South	331	Sept. 1-Oct. 15, 2020	440	1198	0.15	45	**28**	**10**	**5**	28	36	73.40	75	114	1.584	2.037	4.153	4.243	6.450
Yellow	s2	South	333	Sept. 1-Oct. 15, 2020	426	1160	0.23	45	**31**	**13**	**2**	31	34	48.48	52	67	1.811	1.987	2.833	3.038	3.915
Purple	m	Midtown	443	Sept. 1-Oct. 15, 2020	174	474	0.17	45	**14**	**9**	**6**	14	20	61.10	54	96	2.002	2.860	8.737	7.722	13.727
Blue	ep	East	113	Oct. 16-Dec. 12, 2020	108	294	0.06	58	**4**	**3**	**1**	4	6	23.53	15	24	0.715	1.073	4.209	2.683	4.293
Green	sp1	South	331	Oct. 16-Dec. 12, 2020	357	972	0.15	58	**19**	**5**	**3**	19	26	49.18	49	77	1.028	1.407	2.661	2.651	4.166
Yellow	sp2	South	333	Oct. 16-Dec. 12, 2020	426	1160	0.23	58	**31**	**16**	**6**	31	36	78.11	72	113	1.405	1.632	3.541	3.264	5.123
Purple	mp	Midtown	443	Oct. 16-Dec. 12, 2020	534	1454	0.50	58	**40**	**21**	**2**	40	47	67.03	76	100	1.447	1.700	2.424	2.749	3.617
						11633		**151**	**288**												
Blue	EPS	East	114	Jan. 22-March 22, 2021	796	2164	0.25	60	**28**	**10**	**1**	28	32	43.51	54	68	0.658	0.752	1.022	1.268	1.597
Green	SPS1	South	331	Jan. 22-March 22, 2021	357	972	0.15	60	**13**	**9**	**0**	13	16	16.46	21	24	0.680	0.837	0.861	1.098	1.255
Yellow	SPS2	South	333	Jan. 22-March 22, 2021	426	1160	0.23	60	**34**	**12**	**0**	34	33	39.28	44	48	1.490	1.446	1.721	1.928	2.103
Purple	MPS	Midtown	442-443	Jan. 22-March 22, 2021	425	1159	0.31	60	**24**	**11**	**4**	24	29	58.88	54	83	1.053	1.272	2.582	2.368	3.640
Blue	E	East		April 2- May 31, 2021	331	902	0.42	60	**23**	**15**	**2**					80					4.508
Purple	MT1	Midtown		April 2- May 31, 2021	422	1150	0.32	60	**26**	**14**	**2**					51					2.254
Green	MT2	Midtown		April 2- May 31, 2021	421	1147	0.37	60	**25**	**8**	**2**					71					3.147
Yellow	SPS2	South	333	April 2- May 31, 2021	426	1160	0.23	60	**27**	**14**	**6**					116					5.083
Blue	E	East	114-115	June 11-Aug 13, 2021	986	2863	0.49	64	**38**	**12**	**5**					154					2.563
Purple	MT1	Midtown	443	June 11-Aug 13, 2021	804	2188	0.65	64	**48**	**14**	**4**					140					3.049
Green	MT2	Midtown	442-114	June 11-Aug 13, 2021	1138	3095	0.54	64	**47**	**26**	**11**					208					3.203
Yellow	SPS2	South	333	June 11-Aug 13, 2021	426	1160	0.23	64	**42**	**17**	**7**					172					7.066
						19120		**184**	**375**												

Definitions for Figure 11:

(CHT) - Total 'crimes' in the ICON region for the period covered.

(TARG) - Target crimes in the ICON region for the period covered.

(VIOL) - Violent crimes in the ICON region for the period covered.

(ActInd4) - Total Crime points under Index 4 for the ICON region in the period covered.

(hpm4) - Normalized Crime Index under Index 4 for the ICON region in the period covered.