

Summary:

Violent Crime Reduction and Prevention with Risk-Based Policing in Kansas City, Missouri

Kansas City, Missouri is a mid-sized, midwestern city with a long-standing violent crime problem. Chief of Police Richard Smith took office in August, 2017 and quickly declared violent crime a top priority for the Kansas City, Missouri Police Department (KCPD). This focus matched sentiments shared by the public and local government to thwart a problem that has plagued Kansas City at rates consistently higher than the national average. In fact, FBI data ranked Kansas City's homicide rate within the top ten for cities with greater than 250,000 residents eight of ten years the decade before Chief Smith was appointed.

Subsequent analysis of internal data showed murder, aggravated assaults, and armed robberies increased from 2015 through 2018. Incidents involving subjects actively resisting arrest and firearms recoveries also rose during the same period. Kansas City was therefore increasingly violent for citizens and police officers alike.

Chief Smith initiated a search for new strategies to abate violent street crime given other measures had shown limited promise, including hot spot policing or focused deterrence. Chief Smith sought an evidence-based, sustainable strategy that identified and addressed root causes of crime through prevention and community engagement, along with traditional response.

The KCPD previously partnered with the Rutgers Center on Public Security (RCPS) to successfully test the analysis technique Risk Terrain Modeling (RTM) on multiple projects. RTM had since grown into Risk-Based Policing (RBP), a broader public safety strategy using RTM as its foundation. An analyst within the Chief's Office proposed an RBP initiative upon reading about RBP's results in Atlantic City, New Jersey and planning with RCPS members. Chief Smith approved the proposal and officially brought RBP to Kansas City in March, 2019.

The RBP initiative strove to reduce violent street crime through partnership with the RCPS, community stakeholders, and municipal departments. Thirteen treatment areas and four comparison areas were selected for a formal outcome evaluation. Target violent crimes decreased significantly, over 22%, in treatment areas compared to comparison areas during the one-year initiative. A significant spatial diffusion of benefits and significantly fewer officer-initiated activities resulting in arrests/citations occurred as well, proving over-reliance on strict law enforcement is not necessary for meaningful crime reductions. Implications for policy and practice are discussed within the contexts of police responses to urgent crime problems and police-community relationships, including the post-George Floyd era.

Description:

Kansas City, Missouri is the largest city in the state of Missouri with a population just shy of 500,000 residents. Located in the middle of the continental United States, Kansas City has a large footprint for a city given its population, spanning four counties and 315 square miles. Kansas City experienced substantial positive growth and development in recent years, including a rejuvenated downtown district and the addition of world-class attractions such as the World War I Museum and Kauffman Center for the Performing Arts. A state-of-the-art international airport is also slated to debut in 2023. Unfortunately, Kansas City has a chronic record of violent crime despite these positive outcomes.

Suffice it to say Chief of Police Richard Smith faced a significant violent crime problem upon taking his oath of office as Chief for the Kansas City, Missouri Police Department (KCPD) in August, 2017. Specifically, Kansas City's homicide rate ranked in the top 15 for cities with populations greater than 250,000 the decade before Chief Smith was appointed, according to FBI data¹. Acting without delay, Chief Smith listened to concerns and cries for help from the community and city government by declaring violent crime the police department's focal point.

The KCPD has a reputation for being a progressive agency spanning decades, to include numerous contributions to police-related research. The Preventive Patrol Experiment from 1972² is arguably the KCPD's most celebrated effort but other examples include research of gun crime hot spots³, foot patrol⁴, and Risk Terrain Modeling⁵. Building on this tradition, Chief Smith prompted KCPD command staff to search for a new strategy to lessen the grip violent crime had on Kansas City's communities due to other recent efforts, such as focused deterrence, showing initial promise but surges in the very crimes they reduced just a year or two prior. The new strategy had to meet the following requirements:

- Have a strong evidence base
- Be capable of short-term impacts, yet sustainable
- Strike an appropriate balance between crime prevention and traditional response
- Have a focus on community engagement

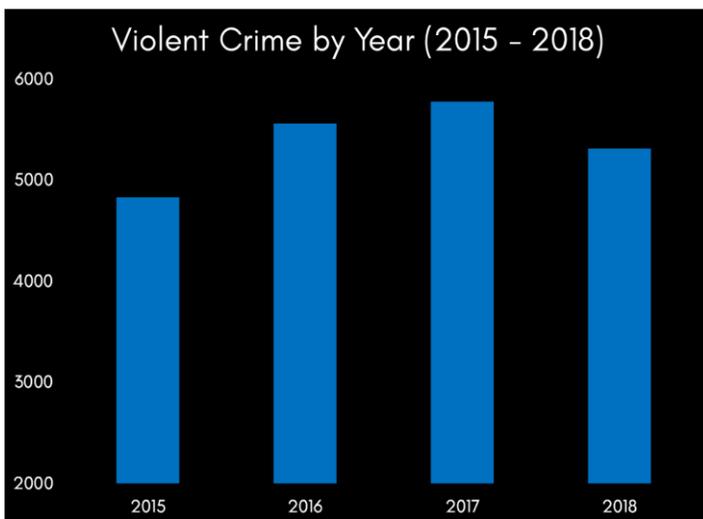


Figure 1

A strategic analyst assigned to the Chief's Office began by analyzing internal data from the agency's Records Management System (RMS). As shown in Figures 1, 2, and 3, results showed violent crime (specifically, homicide, aggravated assaults, and armed robberies) with an overall positive trendline from 2015 through 2018 despite a slight decrease in 2018. The number of incidents involving subjects actively resisting arrest and the number of incidents in which firearms were recovered also showed marked increases for the same period. The data clearly indicated Kansas City as a place with a growing threat of violence for citizens, visitors, and even police officers.

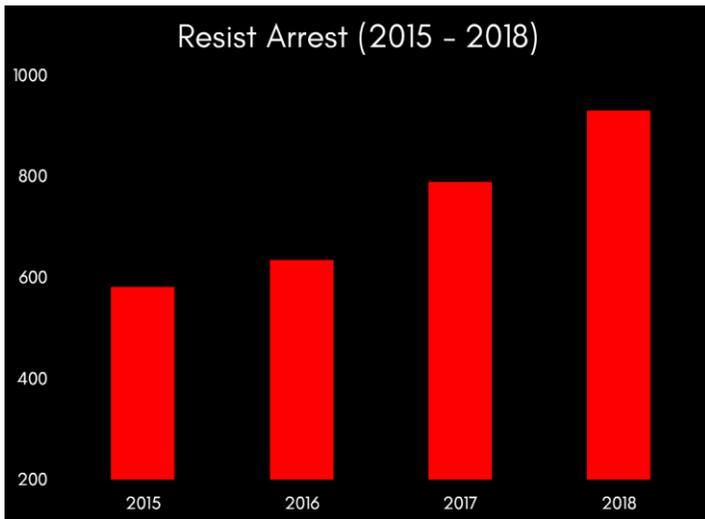


Figure 2

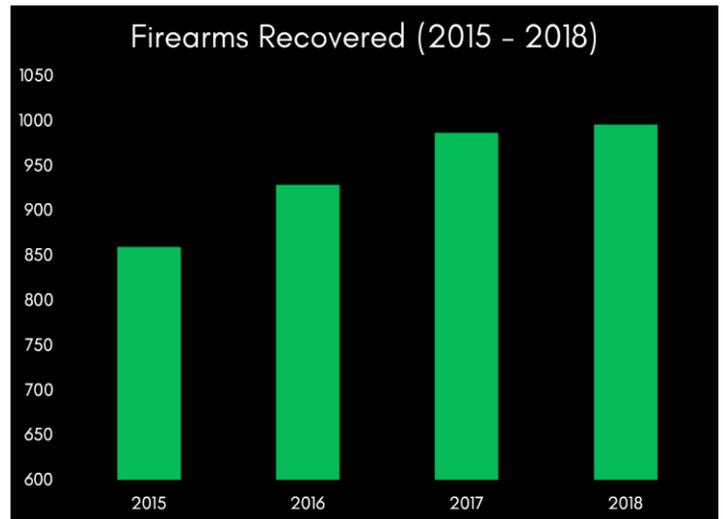


Figure 3

Other significant negative outcomes were identified during the analysis. Officers spent approximately 1,858 hours responding to violent crime in 2018. This figure was calculated using a very conservative figure of only 30 minutes for each incident. In addition, this number reflects only patrol response (i.e., no investigative elements or crime scene technicians) and did not attempt to account for multiple officers responding to a single incident in most instances.

It is also important to consider violent crime’s impacts on elements outside the world of law enforcement. Research from Injury Epidemiology⁶ shows assaults caused by firearm accrue just under \$21,000 in hospitalization costs on average. Translated to the 450 non-fatal shooting victims recorded in 2018 alone the local cost rapidly approaches \$9.4 million.

Chief Smith refused to accept this as the “new normal” when it came to Kansas City’s violent crime problem.

As time passed, the aforementioned analyst stumbled across an article about Atlantic City, New Jersey Police Department’s adaptation of Risk-Based Policing (RBP)⁷. RBP is a public safety strategy based on Risk Terrain Modeling (RTM), a GIS technique the KCPD successfully tested in partnership with the Rutgers Center on Public Security (RCPS) in 2010⁸ and 2013⁹. Simply stated, both RBP and RTM are based on the diagnosis of environmental features that attract or generate crime in a given area. Known as “risk factors”, these features should receive the focus of resources deployed by a police department and its partners (e.g., municipal departments, community groups, or non-profits). The idea is to focus on mitigating the influence of the risk factors, which in turn reduces the likelihood for crime to occur.

Given the existing relationship, the Chief’s Office analyst reached out to colleagues at RCPS to learn more about RBP, including how it was deployed in Atlantic City. Several weeks of discussion and intervention design followed between KCPD and RCPS, with Chief Smith ultimately approving a joint effort to bring RBP to Kansas City in March, 2019.

The KCPD’s RBP plan involved much more than a simple issuing of marching orders for members to carry out. The scope of the initiative, including its data-driven approach and focus on prevention more than traditional law enforcement response, prompted the Chief’s Office to first implement agency-wide training about RBP, ensure adequate data-capturing methods were in place, and make adjustments to executive-level accountability meetings.

RCPS members visited the KCPD in February, 2019 for a full day of training with KCPD members, specifically command staff and crime analysts. A basic understanding of RTM and RBP was provided to commanders, to include how to deploy RBP in their divisions and use pertinent GIS maps and other data to continually assess progress. Analysts, on the other hand, were given hands-on instruction on how to create RTM maps and data necessary to assist commanders' decision-making.

In addition to the site visit, other training opportunities were offered through 2019. The Chief's Office analyst visited several elements throughout the department, including meetings with patrol officers, Community Interaction Officers (CIOs), and the department's social workers. A roll call training video was also distributed department-wide. Finally, posters delineating RBP's core principles were posted in various department facilities. The idea was to truly embed RBP into the KCPD's operations as opposed to making the strategy "just an experiment" where the status quo would quickly return.

Regarding data collection, the KCPD created a custom disposition code in its CAD system, "RTM", to easily track activities related to the RBP initiative. Chief Smith stressed he did not want the strategy to burden officers with additional work. Rather than add to officers' already substantial amount of report writing, the only requirement was for officers to enter a few quick sentences in CAD describing risk-reduction activities conducted in a treatment area. Such comments could be entered in seconds, after which the officer(s) could clear from the incident using the "RTM" disposition code.

All CAD incidents using the "RTM" code could then be easily aggregated and shared using a customized report. Crime analysts could easily forward a report to their respective commander for review and follow-up. The Chief's Office also used such data to gauge how different patrol divisions were progressing during the strategy. Figure 4 is an example of an RTM Activity Report from Central Patrol Division; note the highlighted section describing opportunities for crime prevention:

 RTM Activity Report Police KC/MO Richard C. Smith Chief of Police													
<i>Data from 3/18/2019 to 5/26/2019 for Beat 111 to 144</i>													
EVENTID	DATE	TIME	HR	DOW	ADDRESS	EVENT TYPE	SUBEVENT	RADIO	DISP	BEAT	DIV	XCOORD	YCOORD
K190322776	04/25/2019	2324	24	Thu	3350 TROOST AVE KCMO	AREA PRESENCE (10-10)		166	RTM	141	CPD	276,827.00	105,538.00
** LOI search completed at 04/25/19 23:24:07 166 -- FR0X6D/MO													
K190323095	04/26/2019	0316	4	Fri	E 31ST ST/BROOKLYN AVE KCMO	AREA PRESENCE (10-10)		166	RTM	124	CPD	277,239.00	105,716.00
** LOI search completed at 04/26/19 03:16:43													
K190323101	04/26/2019	0321	4	Fri	E 34TH ST/TROOST AVE KCMO	AREA PRESENCE (10-10)		144	RTM	141	CPD	276,836.00	105,534.00
** LOI search completed at 04/26/19 03:21:38													
BETTER NO PARKING SIGNS INFRONT OF BANBRIDGE. NO LOITERING SIGNS ON BUILDING ACROSS FROM THE ONE STOP AND METRO PCS. SAVE A LOT NEEDS BETTER ALARM SYSTEM AND MORE SURVALINCE. MORE STREETS LIGHTS ON CAMPBELL AND HARRISON. PARKING LOT BEHIND BANBRIDGE NEEDS MORE LIGHTING OFFICERS AND SERGENTS SHOULD ACCESS TO 400 E ARMOUR AND 900 E ARMOUR APARTMENTS.													
K190323105	04/26/2019	0324	4	Fri	1900 INDEPENDENCE BLVD KCMO	AREA PRESENCE (10-10)		166	RTM	121	CPD	277,220.00	107,058.00
** LOI search completed at 04/26/19 03:24:15													
K190323767	04/26/2019	1024	11	Fri	E 34TH ST/TROOST AVE KCMO	PEDESTRIAN CHECK		146	RTM	141	CPD	276,836.00	105,534.00
BM BLK SHIRT BLK PANTS ** LOI search completed at 04/26/19 10:24:09													

Figure 4

Changes were also made to meetings shared among Chief Smith and other command staff. Based on the famous CompStat strategy, KCPD commanders meet each week to discuss ongoing or emerging crime patterns, prolific offenders, or other problems. RBP was added into these weekly meetings to further inculcate RBP into the KCPD's operational mindset.

The Chief's Office analyst also gained a seat at the table of monthly Regulators Meetings at City Hall. Management from various municipal departments would meet monthly to discuss priorities or other important issues. KCPD did not attend these meetings prior to the RBP initiative. The KCPD began attending Regulators Meetings to seek much-needed assistance from municipal partners based on the objective data provided by RTM maps and other information.

With these cornerstones set in place, the RBP strategy officially kicked off in March, 2019 with the overarching goal to reduce violent street crime through partnership with community stakeholders and municipal departments.

Next, patrol commanders were given sets of RTM maps indicating areas of highest risk of violent street crime in their respective areas of responsibility. Highest risk locations were defined as places having greater than two standard deviations from the mean relative risk score¹⁰. "Autonomy with accountability" was an important requirement for Chief Smith; he allowed division commanders to use the maps to choose as few or as many treatment areas as they felt they could handle with their resources, namely manpower. Thirteen treatment areas were selected in total across four of six patrol divisions, with each division selecting two to four treatment areas.

Comparison areas were selected at the same time using a similar method. The same RTM maps were used to look at high-risk areas across the same four patrol divisions. Comparison areas that were chosen were similar to treatment areas in terms of size and general environment (i.e., ensuring treatment areas with significant neighborhood populations were paired with a similar comparison area as opposed to one with more industrial development). While this approach was the path requested by executive command staff it nevertheless revealed itself to be a bit of a limitation in the strategy's design. Specifically, such a preference unfortunately prevented the initiative from becoming a randomized control trial, although this will certainly be the goal for future evaluations.

In terms of what RBP looked like operationally, officers were provided one-page documents for the treatment areas located in their division of assignment. Mirroring Chief Smith's sentiments to avoid an abundance of project-related tasks, he also wanted to prevent "information overload" for KCPD's officers. As shown below in Figure 5, each treatment area's product captured everything an officer (or commander) needed to know in a single page.

The map at the top highlighted the geographic area of interest, including the blue-colored cells of the RTM model indicating locations of highest risk. The bottom left corner provided a ranked list of risk factors unique to the area captured in the map. Officers were therefore instructed to devise and execute tasks aimed at reducing those risk factors. Law enforcement was acceptable if required but the focus was on situational crime prevention and community engagement. Finally, the list found in the bottom right portion of the file contained a temporal breakdown of when the target violent crime types occurred in the treatment area.

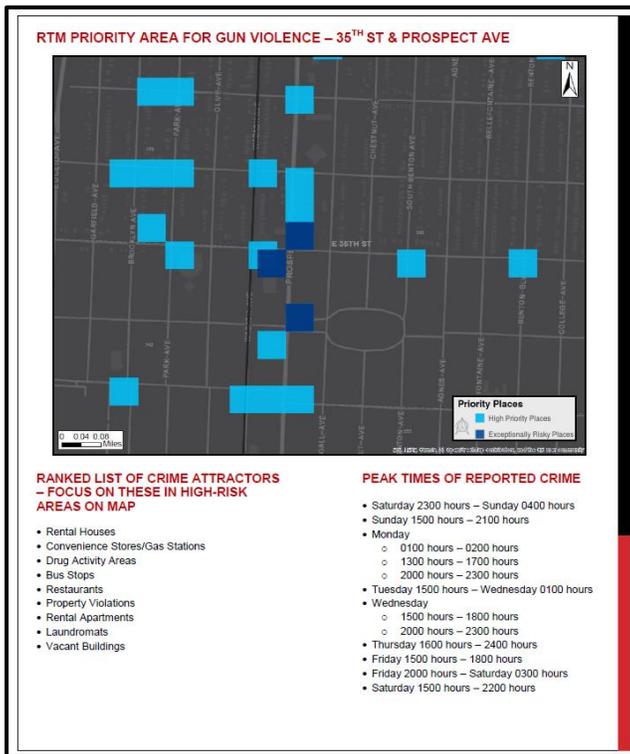


Figure 5

Officers therefore knew where to go, what to address, and when to be there in a concise, easy-to-read format.

Just as commanders were given autonomy to select treatment areas, so too were officers given flexibility in how they chose to address risk factors. This not only established buy-in among rank-and-file members but was also necessary given the variety of risk factors officers would encounter. For example, an officer seeking to resolve an issue involving an abandoned property would require different resources when compared to addressing a liquor establishment or bus stop. This required officers to interact and work with a diverse array of people, to include business owners, neighborhood group leaders, municipal department employees, and KCPD social workers. In essence, the idea was to work hand-in-hand with others who have a stake in public safety and the “response-ability” to address a given risk factor.

To provide a quick example of how RBP worked, one treatment area in Central Patrol Division had a tight cluster of risk factors in a single intersection, namely a convenience/liquor store, vacant properties, and a bus stop. A nearby cell phone store was also part of the risk narrative. Criminal activity, including robberies and shootings, occurred in the area due to loitering and drug sales at the bus stop that were related to the cell phone store. The liquor store also contributed to quality of life issues/violations.

A multi-faceted approach to reduce target crimes involved cooperation among KCPD, the Kansas City Area Transportation Authority (KCATA), and Kansas City, Missouri Fire Department (KCFD) Fire Marshall. The KCATA is the local authority responsible for buses, bus routes, and bus stops. KCPD contacted the KCATA and inquired about moving or removing the bus stop that contributed to loitering. The KCATA agreed to swiftly remove the bus stop after a review of other nearby bus stops showed citizens still had an adequate number of access points for buses in the immediate vicinity. This immediately reduced the amount of loitering and open-air drug sales, which in turn allowed the KCPD more room to employ measures to address drug sales within the cell phone store. The Fire Marshall ultimately shut down the store due to codes-related violations. Efforts such as these helped Central Patrol Division’s treatment areas see violent crime reductions of 42.7%.

The KCPD was very pleased with the results of its assessment. The post-intervention period was from March 15, 2019 through March 14, 2020; the corresponding pre-intervention period used for evaluation purposes was March 15, 2018 through March 15, 2019. All violent crime data were obtained from the KCPD’s RMS, then geocoded and verified in the Esri shapefile (.shp) format for spatial analysis before being provided to RCPS. Additional shapefiles of pertinent geographic areas (e.g., city boundary, patrol division boundaries, and treatment/comparison areas) were also provided.

The benefits of a police-academic relationship became evident, with RCPS assisting KCPD with the outcome evaluation and statistical analysis. The KCPD achieved its crime reduction goals, with target violent crime categories (i.e., homicide, aggravated assault, and armed robbery) having significantly decreased with a drop of 165 fewer violent crimes (a 23.7%

reduction). Treatment areas also vastly outperformed comparison areas by 22.6%. This data and more are captured below in Table 1¹¹. Note the four of six patrol divisions that applied RBP are referred to as the Study Area. In addition, 500-foot buffer areas were included to ascertain any displacement or diffusion of benefits, the latter of which was observed given the Target Buffer Area yielded better results than the Comparison Areas but not Target Areas.

Geography	Pre-intervention Period	Post-intervention Period	Absolute Change
Citywide	5,320	4,831	-489 (-9.2%)
Study Area (i.e., four Patrol Divisions)	4,837	4,417	-420 (-8.6%)
Target Areas	696	531	-165 (-23.7%)
Target Buffer Areas	297	286	-11 (-3.7%)
Comparison Areas	180	178	-2 (-1.1%)

Table 1

Table 2 below provides a more detailed assay of how each patrol division within the Study Area performed¹².

	Pre-intervention Period	Post-intervention Period	Change
Central Patrol Division			
Target Area	166	95	-71 (-42.7%)
Target Buffer Area	95	63	-32 (-33.6%)
Comparison Area	46	45	-1 (-2.1%)
East Patrol Division			
Target Area	158	119	-39 (-2.4%)
Target Buffer Area	94	90	-4 (-4.2%)
Comparison Area	36	44	+8 (+22.2%)
Metro Patrol Division			
Target Area	210	191	-19 (-9.0%)
Target Buffer Area	111	103	-8 (-7.2%)
Comparison Area	59	55	-4 (-6.7%)
South Patrol Division			
Target Area	178	141	-37 (-20.7%)
Target Buffer Area	30	45	+15 (+50%)
Comparison Area	39	34	-5 (-12.8%)

Table 2

While the RBP intervention was clearly a success overall, it is nevertheless fair to point out some patrol divisions performed better than others. As Table 2 explains, Central Patrol and East Patrol performed better than Metro Patrol and South Patrol. Central Patrol and East Patrol outperformed the Comparison Area by 40.6% ($p < .0.05$) and 46.9% ($p < .0.05$), respectively. Meanwhile, Metro Patrol's violent crime decreased and outperformed the Comparison Area by 2.3% ($p < .0.05$), whereas South patrol decreased violent crime and outperformed its Comparison Area by 8% ($p < .0.05$)¹³.

Another surprising finding emerged during assessment of the RBP strategy's data. Although not an explicit goal of the initiative, officers were directed to rely more on risk reduction activities as opposed to rote law enforcement. It was

therefore anticipated officers' self-initiated activity (e.g., vehicle stops, pedestrian stops, or traffic violations) resulting in arrests or citations/summonses would decrease alongside violent crime. In other words, KCPD hoped RBP would work as designed in that fixing of criminogenic conditions would reduce crime, not simply increased stops or arrests.

The analysis revealed the strategy's Target Area saw a 57.9% reduction in self-initiated activity resulting in enforcement action¹⁴. To clarify, this figure refers only to activity generated by officers; a 911 call in a treatment area resulting in the arrest of a crime suspect would not be included in this figure. This is because a citizen generated the 911 call as opposed to an officer's proactive stop. These results, informal though they may be, illustrate crime prevention can be achieved without police depending on purely punitive measures. Enforcement of laws has its place in RBP but again, it is far from the focus.

Beyond statistical findings, RBP also proved to be well-received from the public. Presentations were made with community groups and neighborhood associations such as the Independence Avenue Community Improvement District (CID). Citizens were walked through how RBP works from the ground up, including the *why* behind police actions within the strategy. The RTM process was also shared, namely how there is no proprietary data or other "secret information" included in an RTM model. To that end, the fact RTM models do not include data such as recorded crime, arrest, or other demographic information resonated with members of public, particularly those who are understandably concerned about over-policing in communities.

Building on this concept of transparency with the community, RTM models were shared directly with members of the community. RTM data could be exported in KML format, after which it could be shared with citizens for viewing on smartphones. It should be noted this same data sharing was used within KCPD, as well. Sergeants could display RTM information on TVs in roll call rooms for planning of the day's activities, for example.

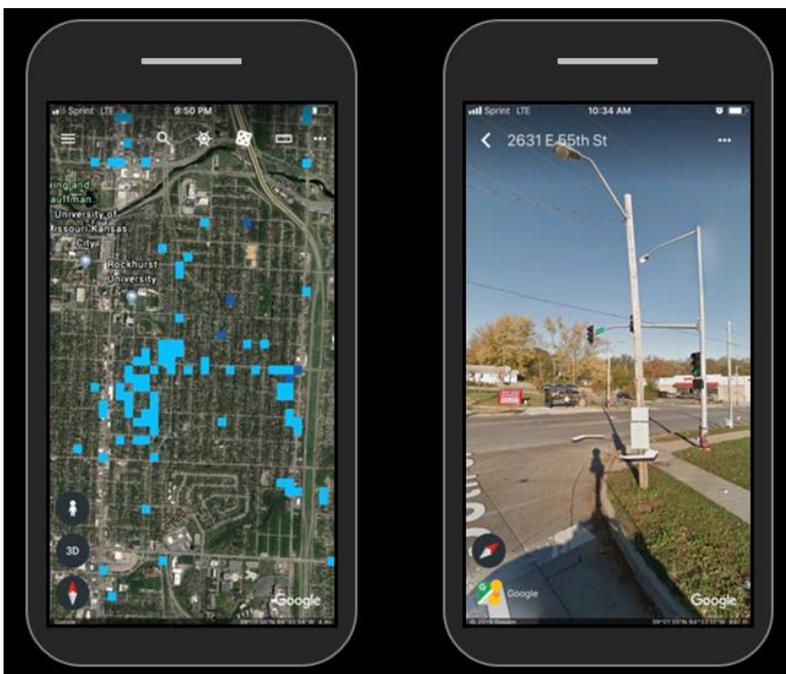


Figure 6

KCPD. Many stakeholders were invited to participate but consistent engagement was difficult at times, with the exception of some select municipal departments. Regulators Meetings proved useful in sharing information but it was frequently

Figure 6 shows how easy it was for citizens or officers to view a high-risk area on a standard GIS map, then use apps such as Google Maps and its Street View function to visually grasp the area's risk factors. Although it may be difficult to see in the picture of the phone on the right, several risk factors are readily visible, including a bus stop and department store.

Despite the encouraging results for both the KCPD and, more importantly, the public, areas of improvement were identified.

One key improvement to make moving forward is to more fully ingrain entities outside the KCPD in the RBP effort. To be sure, this initiative was led by

challenging to get other departments to *act* on that information. Different departments have different priorities, which in turn made buy-in for the RBP effort easy with some departments but more arduous for others.

Moving forward, KCPD would also like to expand the cadre of partners beyond municipal departments. Non-profits and other organizations such as the Greater Kansas City Local Initiative Support Corporation (LISC) or CIDs positioned throughout the city could provide much-needed resources in high-risk areas requiring service and expertise the KCPD simply cannot provide directly. Indeed, this is quite likely RBP's biggest strength in that an RTM analysis helps identify not only the risk factors driving crime in an area but by extension, knowledge about which entity may be best suited to address the issue at hand.

Another problem identified on occasion was officers falling back on enforcement-related habits. Although the reduction in officer-generated enforcement actions is certainly appealing, there were times when supervisory staff had to remind officers to work with more a prevention-oriented mindset, not one of enforcement. Institutional habits such as "just catching bad guys" can be hard to overcome in police culture; in fact, there was some anecdotal feedback the seemingly "kid glove" approach of crime prevention was not favored by a (thankfully) small portion of officers. Much of this discontent quickly subsided, however, once positive results of the RBP strategy were routinely updated throughout the department.

The KCPD was also quite pleased with the outcomes it achieved in the first year of RBP due to how easy it was to initiate and sustain. Financial costs were essentially zero, to include no overtime requirements to fund intervention activities or grants to fund special squads of officers. Similarly, no new teams had to be created to make the initiative function. The KCPD simply "worked smarter, not harder" with existing resources.

Regrettably, the combination of the emerging COVID-19 pandemic and the protests and riots following the death of George Floyd caused KCPD's executive command to make the rational decision to pause the strategy. Chief Smith and other commanders did not want officers to feel distracted or pressured to continue with RBP given such extraordinary work conditions. Other issues of both local and national importance have delayed a return to RBP. The good news is the RBP strategy is set to be deployed anew in coming weeks. Updated RTM models have already been created; it is simply a matter of re-tooling how the KCPD will operate the strategy, particularly in the new operating environment created by COVID-19.

Interestingly, the very challenges confronted in 2020 and beyond provide a new context in which RBP can show promise. In a time of ever-increasing scrutiny and demands for transparency and accountability for law enforcement, RBP is a platform that can and should be explained and shared with citizens or other groups, when appropriate. As mentioned above, the ways in which KCPD educated the public about RBP were met with no pushback. There were questions and healthy discourse, to be sure, but in the end RBP was conveyed and used as a transparent, data-driven approach to reduce violent crime.

RBP has been declared as a civilly just strategy due to that same use of objective environmental data as opposed to previously recorded crime or arrest information¹⁵. Policing in the current climate using RBP as a foundation that focuses on places, not people, therefore makes sense. This is particularly evident when considering other approaches that use

crime or other incident data to drive resources to an area may do little more than create a self-fulfilling prophecy where officers' activities "keep hotspots hot" despite their good intentions.

RBP also provides ample opportunity to go beyond simply sharing information with the community. Rather, RBP invites true dialogue with community groups and other stakeholders using data as a common language. For example, an RTM analysis may reveal gas stations and quick loan businesses as risk factors. Sharing this information is a good first step but police departments can go a step further by seeking feedback on those risk factors, or more importantly, asking citizens for ideas about risk factors the police agency may not have considered. It may well be true residents living in a high-risk area agree gas stations and quick loan businesses are problematic. But if given the chance to suggest libraries may be a risk factor based on their recent experiences at those locations, the police department has an obligation to take that suggestion and run a new RTM model. Perhaps libraries are in fact a risk factor associated with the area; even if they are not, the police can take any new insights back to the person that made the suggestion. More importantly, a stronger relationship between the police and community is being forged along the way.

In conclusion, the KCPD is proud of its accomplishments during its inaugural year deploying RBP. Meaningful results were obtained in crime prevention and reduction, as well as building relationships with numerous sectors within the Kansas City community, ranging from individual citizens, to business owners, to local government. The strategy also gave KCPD opportunities to share its experience with law enforcement and other practitioners from at home and abroad through its peer-reviewed article published in *Police Quarterly*¹⁶, presentations at conferences in the United States and Spain¹⁷, various articles¹⁸, and a webinar¹⁹. The KCPD hopes its RBP initiative serves as a welcome addition to police research and inspires other agencies to replicate or improve upon its groundwork.

References

- 1) Mirabile, F. & Nass, D. (2018, April 26). *What's the Homicide Capital of America? Murder Rates in U.S. Cities, Ranked*. The Trace. <https://www.thetrace.org/2018/04/highest-murder-rates-us-cities-list/>
- 2) Kelling, G., Pate, T., Dieckman, D., & Brown, C. (1974). *The Kansas City Preventive Patrol Experiment*. The Police Foundation.
- 3) Sherman, L., & Rogan, D. (1995). *Effects of Gun Seizures on Gun Violence: "Hot Spots" Patrol in Kansas City*. *Justice Quarterly*, 12(4), 673–693.
- 4) Novak, K., Fox, A., Carr, C., McHale, J., & White, M. (2015). *Kansas City, Missouri Smart Policing Initiative – From Foot Patrol to Focused Deterrence*. Bureau of Justice Assistance.
- 5) Caplan, J. M., Kennedy, L. W., & Baughman, J. (2012). *Kansas City's Violent Crime Initiative: A Place-Based Evaluation of Location-Specific Intervention Activities during a Fixed Time Period*. *Crime Mapping*, 4(2), 9–37.
- 6) Peek-Asa, C., Butcher, B., & Cavanaugh, J.E. (2017). *Cost of Hospitalization for Firearm Injuries by Firearm Type, Intent, and Payer in the United States*. *Injury Epidemiology*, 4(1), 20. <https://doi.org/10.1186/s40621-017-0120-0>
- 7) Serpico, E. (2018, April 9). *Atlantic City's Violent Crime Decreases with Risk-Based Policing Initiative*. The Press of Atlantic City. https://pressofatlanticcity.com/news/crime/atlantic-citys-violent-crime-decreases-with-risk-based-policing-initiative/article_2ff881b0-46c6-59c8-afa8-4534ca34751b.html
- 8) Caplan, J.M., Kennedy, L.W., & Baughman, J. (2012). *Kansas City's Violent Crime Initiative: A Place-Based Evaluation of Location-Specific Intervention Activities during a Fixed Time Period*. *Crime Mapping*, 4(2), 9–37.
- 9) Kennedy, L.W., Caplan, J.M., & Piza, E.L. (2015). *A Multi-Jurisdictional Test of Risk Terrain Modeling and a Place-Based Evaluation of Environmental Risk-Based Patrol Deployment Strategies: Results in Brief*. Rutgers Center on Public Security. http://www.rutgerscps.org/uploads/2/7/3/7/27370595/nij6city_results_inbrief_final.pdf
- 10) Caplan, J.M., Kennedy, L.W., Drawve, G., & Baughman, J.H. (2021). *Data-Informed and Place-Based Violent Crime Prevention: The Kansas City, Missouri Risk-Based Policing Initiative*. *Police Quarterly*. <https://doi.org/10.1177/10986111211003205>
- 11) *ibid*
- 12) *ibid*
- 13) *ibid*
- 14) *ibid*
- 15) Ferguson, A.G. (2017). *The Rise of Big Data Policing*. NYU Press.
- 16) Caplan, J.M., Kennedy, L.W., Drawve, G., & Baughman, J.H. (2021). *Data-Informed and Place-Based Violent Crime Prevention: The Kansas City, Missouri Risk-Based Policing Initiative*. *Police Quarterly*. <https://doi.org/10.1177/10986111211003205>
- 17) Baughman, J. (2019, June 7). *Moving Beyond Policing: An Evolution of Risk Terrain Modeling in Kansas City*. 1st International Conference on Crime Risk Analysis. Elche, Spain.
- 18) Baughman, J. & Caplan J. (2020). *Research in Brief: Risk-Based Policing in the Kansas City, Missouri Police Department*. *Police Chief Magazine*. <https://www.policechiefmagazine.org/rib-risk-based-policing-kcpd>
- 19) Baughman, J. & Caplan, J. (2020, June 18). *Community Engagement and Crime Prevention with Risk-Based Policing: Real Data, Real Results*. Justice Clearinghouse. <https://www.justiceclearinghouse.com/resource/community-engagement-and-crime-prevention-with-risk-based-policing-real-data-real-results/>

Agency and Officer Information

Key Project Team Members:

- 1) Captain Jonas Baughman – Kansas City, Missouri Police Department
- 2) Joel Caplan, Ph.D. – Rutgers Center on Public Security
- 3) Leslie Kennedy, Ph.D. – Rutgers Center on Public Security
- 4) Grant Drawve, Ph.D. – Rutgers Center on Public Security

Project Contact Person:

Jonas Baughman

Captain – Kansas City, Missouri Police Department

1125 Locust Street

Kansas City, Missouri 64106

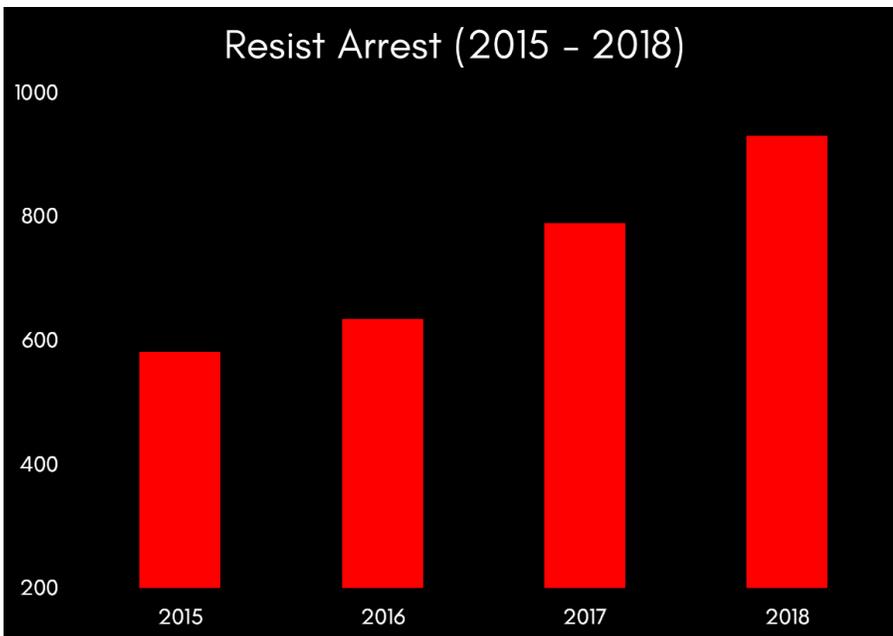
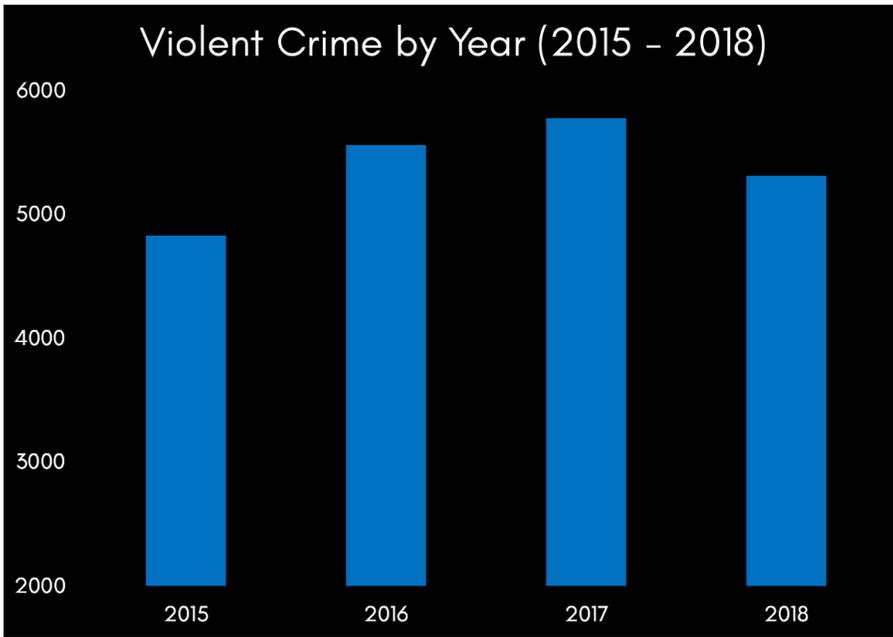
816-234-5358

Jonas.Baughman@kcpd.org

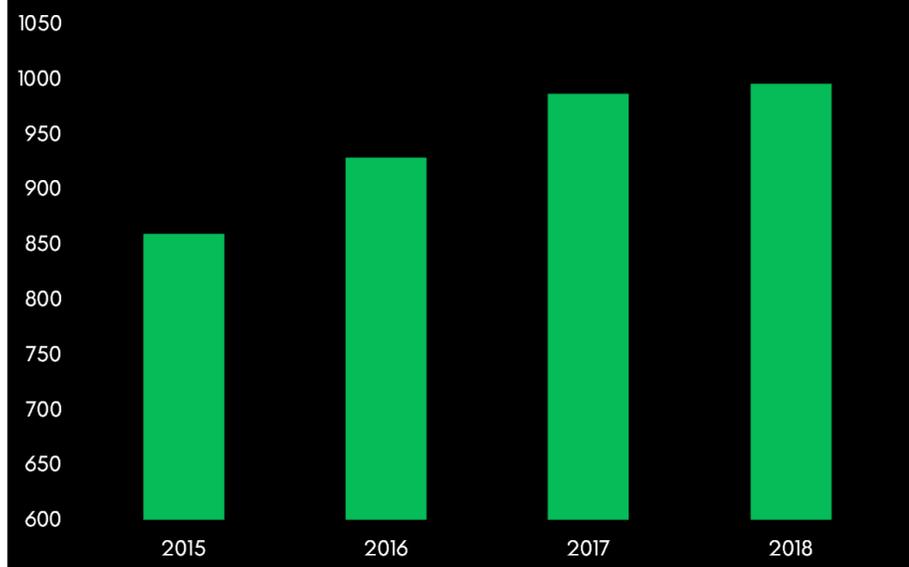
Appendices

Note appendices included here are larger versions of material included elsewhere in the document. For example, graphs were reduced in size in the main body of text but provided here in larger size for easier viewing.

Appendix 1 – RMS Data Graphs



Firearms Recovered (2015 - 2018)



Appendix 2 – Excerpt of RTM Activity Report



RTM Activity Report

Data from 3/18/2019 to 5/26/2019 for Beat 1111 to 144



EVENTID	DATE	TIME	HR	DOW	ADDRESS	EVENT TYPE	SUBEVENT	RADIO	DISP	BEAT	DIV	XCOORD	YCOORD
K190322776	04/25/2019	2324	24	Thu	3350 TROOST AVE KCMO	AREA PRESENCE (10-10)		166	RTM	141	CPD	276,827.00	105,538.00
** LOI search completed at 04/25/19 23:24:07													
166 -- FRDX6D/MO													
K190323095	04/26/2019	0316	4	Fri	E 31ST ST/BROOKLYN AVE KCMO	AREA PRESENCE (10-10)		166	RTM	124	CPD	277,239.00	105,716.00
** LOI search completed at 04/26/19 03:16:43													
K190323101	04/26/2019	0321	4	Fri	E 34TH ST/TROOST AVE KCMO	AREA PRESENCE (10-10)		144	RTM	141	CPD	276,836.00	105,534.00
** LOI search completed at 04/26/19 03:21:38													
BETTER NO PARKING SIGNS INFRONT OF BANBRIDGE. NO LOITERING SIGNS ON BUILDING ACROSS FROM THE ONE STOP AND METRO PCS. SAVE A LOT NEEDS BETTER ALARM SYSTEM AND MORE SURVALINCE. MORE STREETS LIGHTS ON CAMPBELL AND HARRISON.													
PARKING LOT BEHIND BANBRIDGE NEEDS MORE LIGHTING													
OFFICERS AND SERGENTS SHOULD ACCESS TO 400 E ARMOUR AND 900 E ARMOUR APARTMENTS.													
K190323105	04/26/2019	0324	4	Fri	1900 INDEPENDENCE BLVD KCMO	AREA PRESENCE (10-10)		166	RTM	121	CPD	277,220.00	107,058.00
** LOI search completed at 04/26/19 03:24:15													
K190323167	04/26/2019	1024	11	Fri	E 34TH ST/TROOST AVE KCMO	PEDESTRIAN CHECK		146	RTM	141	CPD	276,836.00	105,534.00
** LOI search completed at 04/26/19 10:24:09													

Appendix 3 – Example of RTM Treatment Area Analysis Product

RTM PRIORITY AREA FOR GUN VIOLENCE – 35TH ST & PROSPECT AVE



RANKED LIST OF CRIME ATTRACTORS – FOCUS ON THESE IN HIGH-RISK AREAS ON MAP

- Rental Houses
- Convenience Stores/Gas Stations
- Drug Activity Areas
- Bus Stops
- Restaurants
- Property Violations
- Rental Apartments
- Laundromats
- Vacant Buildings

PEAK TIMES OF REPORTED CRIME

- Saturday 2300 hours – Sunday 0400 hours
- Sunday 1500 hours – 2100 hours
- Monday
 - 0100 hours – 0200 hours
 - 1300 hours – 1700 hours
 - 2000 hours – 2300 hours
- Tuesday 1500 hours – Wednesday 0100 hours
- Wednesday
 - 1500 hours – 1800 hours
 - 2000 hours – 2300 hours
- Thursday 1600 hours – 2400 hours
- Friday 1500 hours – 1800 hours
- Friday 2000 hours – Saturday 0300 hours
- Saturday 1500 hours – 2200 hours

Appendix 4 – Example of RBP High-Risk Area Viewed on Smartphone/Google Earth App

