TRACKING ENFORCEMENT RATES IN LOUISVILLE 2009-2016

A Report of the Research Network for Misdemeanor Justice at John Jay College

Presented to the Louisville Metro Criminal Justice Commission
April 19, 2018
Tracking Enforcement Rates in Louisville, 2009-2016

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April 19, 2018


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ACKNOWLEDGEMENTS

This project would not be possible without the support of the Louisville Metro Criminal Justice Commission and all of the agencies willing to share their data with us, as well as take their time to assist us in interpreting the data.

This report would not be possible without the tremendous assistance from Louisville Metro Police Department who provided data on all arrest and citation enforcements from 2009 to 2016 and traffic stop data from 2015 and 2016. We are grateful for the assistance from Chief Steve Conrad, Deputy Chief Michael Sullivan, Assistant Chief Robert Schroeder, Assistant Chief Shara Parks, Major (Ret.) Tandeta Hettich, Major Eric Johnson, Major Andrew McClinton, Lieutenant James Cirilo, Lieutenant Theodore Eidem, Sergeant Donnie Masden, Jesse Halladay, Cameron Stelzig, and members of the Command Staff of the Louisville Metro Police Department who have all assisted in accessing and providing data for the report.

We would like to thank Kim Allen, Faith Augustine, Jamie Allen, and Maria Gurren as well as the board members of Metro Criminal Justice Commission for their assistance and dedication to the mission of improving the administration of justice and promotion of public safety in Louisville.

We also want to thank Mark Bolton, Director of Louisville Metro Department of Corrections, for sharing data for the project and feedback on reports. Further, we thank Laurie Dudgeon, Director of the Kentucky Administrative Office of the Courts (AOC) for sharing data and supporting the project. We would also like to thank Tara Blair, Director of Pre-Trial Services for AOC, Eva Stansbury the Director of Pre-Trial Services for Jefferson County, and Daniel Sturtevant, Research and Statistics Team Lead at AOC for their assistance in acquiring and understanding Court data.

A special thanks to Preeti Chauhan, the Principal Investigator and Director of the Misdemeanor Justice Project and Dr. Meredith L. Patten, the Executive Director of the Research Network on Misdemeanor Justice whose kind support and informed guidance proved invaluable in the creation of this report. We would also like to thank the staff of the Research Network on Misdemeanor Justice as well as the staff of John Jay College of Criminal Justice for their assistance.

Lastly, this work would not have been possible without funding from the Laura and John Arnold Foundation and its philanthropic commitment to the betterment of criminal justice practice in the United States. A special thanks to Jeremy Travis, Senior Vice President of Criminal Justice and Virginia Bersch, Director of Criminal Justice, at the Arnold Foundation.
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EXECUTIVE SUMMARY

This report is the first of Louisville, Kentucky’s participation in the Research Network for Misdemeanor Justice (RN MJ) at John Jay College of Criminal Justice. The Research Network for Misdemeanor Justice consists of eight cities working to provide an empirical framework to inform data-driven policy initiatives at the local, state, and national levels through local and cross-site analyses. The cities are conducting similar analyses to understand trends in enforcement practices, the sentencing and disposition of cases, and trends in admission and custody of correctional institutions. The present report is a partial replication of Misdemeanor Justice Project’s report, “Tracking Enforcement Rates in New York City, 2003-2014.” This report examines the macro-level volume of police enforcement actions using multiple metrics. The aims of this report are three-fold: (1) to document trends in different types of enforcement actions that occur between the public and law enforcement officials in Louisville between 2009 and 2016; (2) to compare these different types of enforcement actions by demographics; and (3) to contribute to current policy discussions on police enforcement actions. We do not offer in-depth interpretation, make causal inferences regarding the results, or provide policy recommendations.

The longitudinal examination of Louisville Metro Police Department’s enforcement focuses on six actions: felony arrests; misdemeanor arrests; misdemeanor citations; moving violation arrests; moving violation citations; and bench warrants. Traffic stop data were not included in analyses due to limited data availability and measurement issues across datasets. We examine trends for the above enforcement actions from 2009 to 2016 in Louisville, Kentucky as a whole and by age, gender, and race/ethnicity (when data are available).

The six take-home messages from this report are the following:

1. The overwhelming majority (91.9 percent) of enforcement actions from 2009-2016 were for non-felony offenses.

2. The moving violation citation rate was consistently the highest enforcement rate, followed by misdemeanor arrests, misdemeanor citations, bench warrant arrests, felony arrests, and moving violation arrests.

3. Total enforcement rates have decreased the past three years following the enforcement rate peak in 2013. The 2016 enforcement rate was lower than the rate in 2009.

4. Demographic trends in enforcement varied. Over the eight-year period, 18-20 year-olds and Hispanics experienced the greatest amount of fluctuation in enforcement rates. Alternatively, enforcement rates for the remaining demographic groups were relatively constant.

5. There were differences in enforcement activity between the demographic groups. Men had higher rates compared to women; youngest age groups had higher rates than

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2 Published reports from the Misdemeanor Justice Project can be found at http://misdemeanorjustice.org/project/mjp-phase-i/.
older age groups; and Blacks and Hispanics had higher rates compared to Whites. However, these gaps narrowed over time, as each gap is lower in 2016 than in 2009.

6. Compared to New York City, Louisville had higher total enforcement rates in 2014. Similar to Louisville, 95.1 percent of NYC enforcement actions were for non-felonies. Finally, Louisville had smaller enforcement gaps between sexes, age groups, and racial/ethnic groups compared to NYC.
INTRODUCTION

Police practices in the United States are currently of great political salience. Concerns regarding policing focus on a variety of issues related to the enforcement of laws, police discretion, police use-of-force, and police-community relations. Similarly, race and class issues continue to be discussed in national police debates. Too often, these discussions occur without empirical understanding of the trends in the police enforcement practices.

The Research Network for Misdemeanor Justice (RNMJ)\(^3\) at John Jay College of Criminal Justice in New York City was created to provide practitioners, policy-makers, researchers, and community stakeholders with the empirical data needed to inform these discussions. The RNMJ is a collection of eight city-researcher partnerships collaborating to analyze criminal justice processes and compare data across sites.\(^4\) Louisville, Kentucky was selected to join the Research Network in partnership with the Metro Criminal Justice Commission and the University of Louisville.

The goal of this document is to report dispassionately the best evidence possible regarding the enforcement activities of Louisville Metro Police Department in Louisville, Kentucky. In particular, this report presents trends in felony arrests, misdemeanor arrests and citations, moving violation arrests and citations, and bench warrant arrests. Further, this report analyzes this data to examine enforcement counts and rates by the age, gender, and race/ethnicity of persons receiving enforcement attention from 2009 to 2016. Examining these enforcement actions can allow local communities a better understanding of some forms of police-citizen interactions and understand the multitude of enforcement practices by local police departments. Such data, if considered, can inform discussions at the local, state, and national level.

This first report provides a macro-level picture on the number and rates of enforcement actions (felony arrests, misdemeanor arrests and citations, moving violation arrests and citations, and bench warrant arrests). We do not track these from point of contact to disposition and sentence. Thus, larger aspects of the criminal justice system are not examined. We recognize at the outset that this report does not include all the different types of enforcement activities which occur within Louisville and Jefferson County. Further, the data reflect only information provided by the Louisville Metro Police Department only. The larger metropolitan area has a number of smaller agencies, which engage in law enforcement actions. These other organizations may well contribute to the overall experience of those in Louisville with the police.

The report presents data in an objective, neutral tone without attempting to tease apart causal conditions with regard to trends. There are potentially numerous reasons why enforcement rates

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\(^3\) The RNMJ is part of the Misdemeanor Justice Project at John Jay College of Criminal Justice in New York City. The Misdemeanor Justice Project in New York has so far created seven reports examining criminal justice issues, such as police discretion, trends in misdemeanor arrests, and trends in correctional admissions and custody.

\(^4\) The eight cities include New York City, New York; Los Angeles, California; Seattle, Washington; Durham, North Carolina; Meridian, Mississippi; St. Louis, Missouri; Louisville, Kentucky; Prince George County, Maryland.
could have changed over time. The last several years in American policing has seen a variety of impactful events. At a national level, the widespread police protests following the shooting of Michael Brown in Ferguson, Missouri, the killing of six Dallas police officers, and the President’s 21st Century Policing Taskforce may have influenced police behavior or police strategies, and subsequently enforcement rates. Changes in state law could also influence practices, for instance Kentucky House Bill 463 went into effect in 2012 and changed peace officers’ discretionary arrest powers. In particular, the bill states, “a peace officer shall issue a citation instead of making an arrest for a misdemeanor committed in his or her presence…. (KRS 431.005).”\(^5\) Finally, at a local level numerous events could have influenced enforcement practices. For example, changes in leadership in the Mayor’s Office (2010) and LMPD (2012) could have led to new enforcement strategies or the continuation of existing practices. Therefore, the report does not examine or discuss the influence of LMPD’s policing strategies or the spatial distribution of crime and calls-for-service on enforcement strategies. Each of these represent a possible explanation of the trends; however, establishing causal relationships is beyond the scope of this report. We hope practitioners, researchers, and policy-makers take on this task to deepen the understanding of these trends. To assist in understanding the context of enforcement practices, we do set the findings of this report in the larger context of crime rates in Louisville. The following figures set that context.

Using data from the FBI’s Uniformed Crime Report, we can examine violent and property crime rates from 2004 to 2016. From 2004 to 2016, Louisville experienced a steady crime rate, decreasing until 2013, where a slight increase occurred (see Figure 1). Comparing 2004 and 2016, violent crimes (murder, robbery, rape and aggravated assault) increased, rising from 525 (violent crimes per 100,000 population) to 676 (violent crimes per 100,000 population). In absolute terms, there were 3,280 violent crimes in 2004 and this increased to 4,621 violent crimes in 2016. From 2004 to 2016, rates for rape (35 to 29) and robbery (236 to 221) decreased, while aggravated assault (244 in 2004 to 408 in 2016) and murder (10.6 in 2004 to 17.4 in 2016) increased.

\(^5\) There are exceptions to this law, where paragraph b states “a peace officer may make an arrest instead of issuing a citation for a misdemeanor committed in his or her presence if the misdemeanor is: (1) a the violation is of KRS Chapter 508, 510, or 527, or KRS 189A.010; an offense in which the defendant poses a risk of danger to himself or herself, or another person; or (3) an offense in which the defendant refuses to follow the peace officer’s reasonable instructions.” Further, paragraph c states “a peace officer shall make an arrest for violations of protective orders issued pursuant to KRS 403.715 to 403.785.
Non-violent (property) crimes—including burglary, larceny, motor vehicle theft, and arson—also increased slightly. From 2004 to 2016, the nonviolent crime rate increased from 4,191 (per 100,000) to 4,424 (per 100,000), a five percent increase in nonviolent crime rates. The burglary rate fell from 1,099 (per 100,000) to 863 (per 100,000). Conversely, the motor vehicle theft rate increased from 483 (per 100,000) to 638 (per 100,000) and the larceny-theft rate increased from 2,607 (per 100,000) to 2,922 (per 100,000), an increase of almost 3,500 larcenies. Overall, the crime rates in Louisville were relatively stable; however, there has been slight increase in the past three years.

As mentioned before, numerous possible contextual factors could influence enforcement practices. When reading the findings, one should also consider this report analyzes charges and not individuals. In any given enforcement-action, an individual could be charged with multiple offenses. Further, the multiple offenses could include both felony and misdemeanor infractions. Across the eight-year study period there were over 1.25 million enforcement actions taken by LMPD; however, only 389,656 individuals were arrested or received a citation and over 180,000 of these individuals received a single enforcement action (arrest or citation). The average number of charges per individual was three, the median was two, and the number of charges per person ranged from 1 to 545, with 60 individuals receiving over 100 charges. Since the report focuses on charges, we cannot make individual-level conclusions based on the data.
DEFINITIONS AND DATA ON ENFORCEMENT

For the purposes of this report, enforcement is defined as an action involving a member of the public and a law enforcement official that involves the issuance of a moving violation citation or arrest; a misdemeanor citation or arrest; a felony arrest; or an arrest for a bench warrant. The report provides totals and rates for each of the enforcement actions and combined enforcement actions. Not all possible enforcement actions are included in the study, for instance summonses and traffic stops are not included in the report due to data limitations. Louisville Metro Police Department (LMPD) and the U.S. Census Bureau provided the data found in this report.

All the data provided by LMPD are the property of that respective agency. Any further use of the data must be approved by the appropriate agency. Any points of view or opinions contained within this document are those of the authors and do not necessarily represent the official positions or policies of LMPD.

All enforcement data was obtained from LMPD’s data-management system. The data contains information on arrest type, which differentiates between arrest, citation, warrant, summons, and juvenile. However, these categories did not differentiate between misdemeanor and felony arrests or misdemeanor and moving violation citations. Therefore, we created cross-tabs between arrest type and the UOR codes to identify the various enforcement types. Please note summonses were not included in the analyses due to the small number of enforcement actions. Further, this report looks at persons 18 years and older so juveniles are also not included. Brief descriptions of the data and each type of enforcement activity are provided below:

**Felony Arrests:** Felony arrest data were obtained from Louisville Metro Police Department from 2009 to 2016. Data prior to 2009 was not available in their current data-management system. The felony arrest data contained age, race, ethnicity, and sex information on all persons arrested, as well as Kentucky UOR and NIBRS codes for offenses. Only arrests that were made by LMPD in Louisville were included in the analyses. Further, any felony arrest of an individual under the age of 18 was excluded in the analyses.

**Misdemeanor Arrests:** Data on misdemeanor arrests from 2009 to 2016 were also made available by LMPD. The data provide information on arrestee demographics, geographic location of arrest, and charges. The charge information included Kentucky UOR codes as well as NIBRS codes. Only arrests that were made by LMPD in Louisville were included in the analyses. Further, any misdemeanor arrest of an individual under the age of 18 was excluded in the analyses.

**Misdemeanor Citations:** Data on misdemeanor citations from 2009 to 2016 were also made available by LMPD. The data provide information on arrestee demographics, geographic location of arrest, and charges. The charge information included Kentucky UOR codes as well as NIBRS codes. Only citations that were made by LMPD in Louisville were included in the analyses.

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6 Active Kentucky Violation Codes can be found at: [http://www.kentuckystatepolice.org/violation_codes/2015/KRS_Order.pdf](http://www.kentuckystatepolice.org/violation_codes/2015/KRS_Order.pdf)
analyses. Further, any misdemeanor citations of an individual under the age of 18 was excluded in the analyses.

**Moving Violation Citations:** Data on moving violation citations also come from LMPD’s data management system from 2009 to 2016. We used Kentucky UOR codes to distinguish between misdemeanor traffic offenses and moving violation citations. The moving violation citations contain demographic information as well as charge description, and contain only those traffic laws that result in a violation and not an offense resulting in an arrest.

**Moving Violation Arrest:** Data on moving violations arrests also come from LMPD’s data management system from 2009 to 2016. We used Kentucky UOR codes to distinguish between misdemeanor traffic offenses and moving violation arrests. The moving violation arrests contain demographic information as well as charge description, and contain only those traffic laws that result in an arrest.

**Bench Warrants:** Data on warrants also comes from LMPD’s I-LEADS database from 2009 to 2016. Again, we use Kentucky’s UOR codes to identify bench warrant offenses. Within Kentucky UOR codes all warrant-related offenses are listed as “other.” In this report, we created a special category containing only Bench Warrant arrests. Warrants for new felony or misdemeanor charges are found in the corresponding felony or misdemeanor arrest category.

**Traffic Stops:** We also obtained traffic stop data from LMPD. The traffic stop data is publicly available on LMPD’s data portal. LMPD sworn personnel are required to fill out a traffic stop form for any traffic stop. The form contains citizen demographic information, indicates whether an arrest or citation occurred, as well as whether or not a search occurred. We do not use traffic stop data for two reasons. First, the available traffic stop data only contains 2015 and 2016 data. Second, the traffic stop data uses a pre-defined age categories that do not match the age-categories used by the Research Network for Misdemeanor Justice. In particular, the traffic stop reports measures ages 16-19, 20-29, 30-39, and so on. Since this report only examines those individuals 18 and older, we are not able to separate out juveniles. One should note that the inclusion of traffic stop data could potentially alter the differences in enforcement rates across gender, age groups, and race.

**United States Census Bureau:** Population data were provided by the Misdemeanor Justice Project at John Jay College. Population counts were gathered from the National Historical Geographic Information System (NHGIS) at the U.S. Census for Jefferson County, Kentucky. Population counts were used for years 2000 and 2010, and linear interpolation was used to calculate population base for the years between the endpoints. Data was pulled for total, age, race, and sex demographics.

The report presents raw numbers and population rates. Raw numbers give a sense of trends over time. All rates calculated are population specific. For instance, rates for 18-20 year-old males are based on the number of 18-20 year-old males in that given year in Jefferson County. All rates are

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7LMPD’s publicly available traffic stop data can be found here: https://data.louisvilleky.gov/dataset/lmpd-stops-data
calculated per 100,000 in the population. Percentages are also reported when describing enforcement rates in the population. Percentages represent the enforcements per 100,000 and not the percentage of people in the population who experience an enforcement action. For instance, there were 14,091 felony arrests out of 152,382 total enforcement actions in 2009, or 14.09 percent.

Census data is not without limitations. First, census data only includes individuals who live in Jefferson County, and not those who commute in or through the area. Second, the census has consistently miscounted certain demographic groups. For instance, Blacks were undercounted in the 2010 census by 2.1 percent.\(^8\) Third, the census does not account for the homeless.\(^9\) Further, it is also important to note that the calculated rates do not account for an individual who has multiple contacts with law enforcement in a given year. While these limitations exist, the rates provide valuable information in relation to possible population fluctuations over time.

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NUMBERS AND RATES FOR ENFORCEMENT: OVERALL

The following graphs present the cumulative number of enforcement actions and enforcement rates in Louisville. The figures include the police enforcement actions related to felony arrests, misdemeanor arrests and citations, moving violation arrests and citations, and bench warrant arrests. Traffic stops are not included in the analysis.
Figure 2: Number of Enforcement Actions in Louisville 2009-2016.

Figure 2 illustrates the number of enforcement actions in Louisville, KY, which include felony arrests, misdemeanor arrests and citations, moving violation arrests and citations, and bench warrant arrests. In terms of raw numbers, there was a peak in 2013 with 173,955 combined enforcement actions. Following 2013, there was a steady decline each year, ending in 2016 with 124,544 enforcement actions. There were 43,742 fewer enforcement actions in 2016 than in the peak enforcement year of 2013.


10 Traffic stops data were not included in the analysis due to only two years of data available for the report. In 2015, there were 46,199 traffic stops, which would have increased the total enforcement actions by 32.73 percent to 187,355. In 2016, there were 33,877 traffic stops, resulting in a 27.20 percent increase in 158,421 total enforcement actions. In 2015, traffic stops would have maintained the third highest proportion of enforcement actions in 2015 and 2016.
Misdemeanor arrests also declined from 39,307 in 2010 to 26,768 in 2016. There were 19,397 citations for misdemeanors in 2009; these peaked at 29,676 in 2011 and declined to 16,183 in 2016.

Felony arrests peaked in 2009 with 13,898 arrests declined to 11,572 in 2012 and ended with 12,758 such arrests in 2016. Bench warrant arrests represented 15,010 enforcement actions in 2009. The count for these actions peaked in 2013 at 15,328 arrests and were at 14,686 in 2016.

Moving violation citations accounted for the greatest proportion of enforcement actions in each of the 8 years, ranging from 31.38 percent in 2009 to 41.74 percent in 2014.

Misdemeanor arrest maintained the second highest proportion of enforcement actions across the 8 years. Ranging from 25.22 percent in 2009 to a low of 18.88 percent in 2014.

Warrant actions ranged from a low of 7.35 percent in 2011 to a high of 11.79 percent in 2016 and across the 8 years were the third highest proportion of enforcement actions.

Finally, across the 8 years felonies were the lowest proportion of enforcement action, ranging from 7.1 percent in 2011 to 10.24 percent in 2016.
Figure 3: Enforcement Rates in Louisville from 2009-2016

Figure 3 shows the individual and combined enforcement action rates in Louisville for felony arrests, misdemeanor arrests and citations, moving violation citations and arrests, and warrant actions. The combined enforcement rate started at 26,976 per 100,000 in 2009 and rose to a rate of 30,244 per 100,000 in 2013 before dipping to a rate of 21,513 per 100,000 in 2016. Indeed, the overall enforcement rate for all actions in 2016 was lower than the same rate in 2009. However, moving violations generally increased from 2009 to 2014 and declined in 2015 and 2016. In terms of raw numbers, there were 152,382 enforcement actions in 2009, peaking at 173,955 in 2013, and then dipping to 124,544 enforcement actions in 2016. Notably, this combined enforcement rate will be used as a reference point called Louisville total enforcement rate in subsequent figures.

11 Inclusion of traffic stop data in the total enforcement rate would result in a significant increase in enforcement rates for 2015 and 2016. Since we do not possess the traffic stops data for previous years, we determined the total enforcement rate in this graph and subsequent graphs should only include enforcement actions found in all four years.
The rate for enforcement of moving violation arrests started at 2,790 per 100,000 in 2009, rose in 2010 to a rate of 2,792 per 100,000 and then generally declined to a rate of 1,309 per 100,000 in 2016. In terms of raw numbers, there were 15,765 moving violation arrest in 2009. The number increased to 15,895 in 2010 and declined to 7,583 in 2016.

Moving violation citations occurred at a rate of 8,464 per 100,000 in 2009 rose to a high of 12,358 per 100,000 in 2014. The rated began to decline in 2015 and ended at 7,556 per 100,000. Similar to the overall enforcement rate, the rate for moving violation citations in Louisville in 2016 was lower than the rate in 2009. There were 47,816 moving violation citations in 2009. The number increased to 71,323 in 2014 and fell to 43,743 in 2016.

The felony arrest rate was relatively consistent across the data. The rate started at 2,460 per 100,000 in 2009 and ended at a rate of 2,203 per 100,000 in 2016. In 2009, felony arrests peaked at 13,898 arrests before ending at 12,758 felony arrests in 2016.

The rate of bench warrant arrest rates started at 2,657 per 100,000 in 2009. This rate then declined over the next few years only to peak in 2013 at 2,664 per 100,000 and continued to decline in 2016 at rate of 2,536 per 100,000. The absolute number of warrants was 15,010 in 2009, peaked in 2013 at 15,328, and then fell to 14,686 in 2016.

Misdemeanor arrest rates began at 6,803 per 100,000 and increased to 6,904 per 100,000 in 2010. The rate then began a general decline to 4,623 per 100,000 in 2016. In 2009, there were 38,430 misdemeanor arrests. The number increased to 39,307 in 2010 and then generally declined across time to 26,768 in 2009.

Misdemeanor citation rates began at 3,433 per 100,000 in 2009 and increased to a peak of 5,194 in 2011. The rate then fell to a low of 2,795 per 100,000 in 2016. There were 19,397 misdemeanor citations in 2009 and increased to a peak of 29,676 in 2011. Subsequently the number of misdemeanor citations decreased to a low of 16,183 in 2016.
ENFORCEMENT RATES: GENDER

The figures presented below illustrate the trends in Louisville by gender from 2009 to 2016. Overall, males have a substantially higher enforcement rate compared to females across each enforcement type. The below figures examine the total enforcement rate, felony arrest rate, misdemeanor arrest rate, misdemeanor citation rate, moving violation arrest rate, moving violation citation rate, and bench warrant rate for males and females. Further, the Louisville enforcement rate in figures 4 and 5 provide a reference point for the combined enforcement rate for felony arrests, misdemeanor arrests and citations, moving violations and arrests, and bench warrant actions for all individuals over age 18.
Figure 4: Enforcement Rates for Males in Louisville 2009-2016

Figure 4 shows the male combined enforcement rate from 2009 to 2016. As shown in the graph, the male total enforcement rate began at 40,583 per 100,000 or 40.58 percent in 2009 and increased to 42,596 per 100,000 or 42.96 percent in 2013, which was the peak. The rate for male enforcement declined precipitously in 2015 and ended with an overall rate of 31,025 per 100,000 or 31.02 percent in 2016, substantially lower than the overall rate in 2009.

Overall, there was a 24 percent decrease in total male enforcement rate for all individuals over 18. In terms of raw numbers, in 2009 there were 108,516 enforcement actions for males in Louisville, eventually peaking to 116,193 in 2013 followed by a decline to 85,191 in 2016. Compared to Louisville’s overall enforcement rate, the total male enforcement rate was higher. However, the singular enforcement rates (felony, misdemeanor arrests and citations, moving violation arrests and citations, and bench warrants) were each lower than the overall Louisville enforcement rate.

Enforcement actions involving moving violation citations for males experienced general growth from 2009 with a rate of 11,088 per 100,000 to 15,935 per 100,000 in 2014. The rate began to drop in 2015 ending with a moving violation rate of 9,880 per 100,000 in 2016, a rate lower than found in 2009. Moving violation arrests for males began at 4,906 per 100,000 in 2009 and declined considerably to a low of 2,232 per 100,000 in 2016.
There were 29,650 male moving violation citations in 2009. This number peaked in 2013 at 43,624 and declined to 27,131 in 2016. Moving violation arrests numbered 13,120 in 2009. This number increased to 13,276 in 2010 and then generally decreased across the data to 6,129 in 2016.

The rate for male misdemeanor arrests experienced a peak in 2010 at 11,055 per 100,000. The rate then began a slow decline general decline to 7,163 per 100,000 in 2016. The 2016 misdemeanor arrest rate for males was the lowest during the study period. In terms of raw numbers, there were 29,394 misdemeanor arrest of males in 2009. The number peaked at 29,835 in 2010 before decreasing to 19,669 in 2016.

At the start of the data, the male misdemeanor citation rate was 4,665 per 100,000. This rate increased in 2011 (6,995 per 100,000) and declined sharply in 2015 to 4,616 per 100,000. Notably, the rate rebounded substantially to a peak level in 2016 of 7,009 per 100,000. Male misdemeanor citations numbered 12,476 in 2009. This number rose to 18,946 in 2010, declined to 12,675 in 2015 and increased to 19,246 in 2016.

The rate of male bench warrant arrests went from 4,288 per 100,000 in 2009 to 3,780 in 2016, a drop of 12 percent over the period. This equated to 11,466 warrant arrests in 2009, a low of 8,589 in 2012 and 10,382 arrests in 2016. During the study period, the felony arrest rate began at 4,095 per 100,000 in 2009 and ended at 3,527 per 100,000 in 2016, a 14 percent decrease in the male felony arrest rate. There were 10,951 felony arrests of males in 2009 and 9,687 in 2016.
As illustrated in Figure 5, the combined enforcement rate for females is substantially lower than for males and the enforcement rate for all individuals over the age of 18 (i.e., the Louisville enforcement rate). In 2009, the total female enforcement rate was 14,745 per 100,000 or 14.75 percent. This peaked in 2013 at 19,099 per 100,000 or 19.10 percent and then declined to 12,931 per 100,000 or 12.93 percent in 2016. Notably, the female enforcement rate peaked in 2013, while the male enforcement rate peaked in 2011. Furthermore, note female rates were less stable than male enforcement rates, ranging between 12.93 percent and 19.10 percent. In terms of raw numbers for females, there were 43,866 enforcement actions in 2009, the number peaked in 2013 at 57,755 and declined to 39,353 in 2016.

The rate for female moving violation citations increased from 2009 (6,106 per 100,000) and peaked in 2013 (9,186 per 100,000). There was a slight decline in 2014 and larger declines in 2015 and 2016 where the rate was 5,458 per 100,000. The decrease from the 2013 peak and the 2016 valley was a 41 percent decrease. Female moving violation citations numbered 18,166 in 2009, peaked at 27,780 in 2013 and declined to 16,612 in 2016. Compared to males, females have lower moving violation enforcement rates and counts.
Female moving violation arrests started at a peak of 889 per 100,000 and generally decreased until 2013. The rates then again decreased in 2014 and ended in 2016 with a rate of 477 per 100,000. Female moving violations arrest numbered 2,645 in 2009 and declined to 1,454 in 2016.

Misdemeanor arrests actions involving females increased from 3,037 per 100,000 in 2009 to a peak of 3,163 per 100,000 in 2010. The rates declined over the next two years but rebounded in 2013. The rate then declined to a low of 2,332 in 2016. In terms of raw numbers, there were 9,036 female misdemeanor arrests in 2009, with a peak of 9,472 in 2010 and a final count of 7,099 in 2016.

Misdemeanor citation rates for females started at 2,326 per 100,000 and peaked in 2011 at 3,570 per 100,000. The rates maintained general consistency until 2015 and declined sharply in 2016 to 1,911 per 100,000. In terms of raw numbers, there were 6,921 female misdemeanor citations in 2009, with a peak of 10,725 in 2011 and a final count of 5,816 in 2016.

The felony arrest rate and warrant arrest rate were stable over the timeframe. The felony arrest rate was 990 per 100,000 in 2009 and remained generally consistent to 2016 with a rate of 1,009 per 100,000. Enforcement rates for female felonies were more consistent and numerically low compared to males from 2009 to 2016. There were 2,947 felony arrests of females in 2009, a peak of 3,189 in 2014, followed by a slight decrease to 3,071 in 2016.

The warrant arrest rate was 1,191 per 100,000 in 2009 and increased to 1,474 per 100,000 in 2016. Bench warrant actions involving females numbered 3,544 in 2009 fell to a low of 2,983 in 2011, and increased to a high of 4,486 in 2016.

To compare male and female enforcement rates we use ratios using the female enforcement rate as the base and examining three time points, the beginning of the study period, the male enforcement rate peak in 2013, and the end of the study period in 2016. In 2009, males had an enforcement rate 2.75 times higher compared to females. The difference dropped to 2.23 in 2013 and increased slightly in 2016 at 2.40. As a whole, the enforcement rate gap between males and females remained relatively stable across the eight-year period.
ENFORCEMENT RATES: AGE-RELATED TRENDS

The figures presented below illustrate trends in enforcement actions for Louisville by age groups (18-20, 21-24, 25-34 and 35 and older) from 2009 to 2016. The age ranges match the groupings found in Misdemeanor Justice Project’s “Tracking Enforcement Rates” report and provides consistency across the Research Network member cities. The authors of the New York City report, selected the time frame based on policy and availability of data (e.g., the age of criminal responsibility in New York, more common age of criminal responsibility in other states, the legal drinking age) and research on life course patterns of antisocial activity.¹² Unlike New York’s report, this report does not examine 16-17 year olds, as the age of criminal responsibility in Kentucky is 18.

The following figures include Louisville’s enforcement rate to provide a reference point for the combined enforcement for felony arrests, misdemeanor arrests and citations, moving violation arrests and citations, and bench warrant actions for all individuals over age 18.

¹² The relationship between age and crime is robust in criminological research. Research shows crime increases in early adolescence and peaks in the early to mid-20s before decreasing. By age 35, most adults have desisted from crime. Further, Uniformed Crime Report data shows that despite 18-24 represented only 11 percent of the population, they account for 28.7 percent of all arrests across the United States.
The enforcement rates in Figure 6 show the 21-24 year olds had the highest total enforcement rate, followed by the 18-20 age group, 25-34 age group, and then the 35 and over age group. The three youngest age groups had higher rates compared to the overall Louisville rate; however, the oldest group was below the overall rate. The enforcement rate for three age groups (i.e. 18-20, 21-24, and 25-34) experienced somewhat similar trends from 2009 to 2016. Generally, these three age groups (18-20, 21-24, and 25-34) experienced an increase in enforcement actions from 2009 to 2011. The four age ranges (i.e. 18-20, 21-24, 25-34, and 35 and above) experienced a drop in 2012 and three of the age groups (i.e. 21-24, 25-34, and 35 and above) an increase in 2013. Enforcement actions for the four groups (i.e. 18-20, 21-24, 25-34, and 35 and above) declined in 2015 and 2016. All age ranges experienced a lower enforcement rate in 2016 compared to 2009.

In 2009, the enforcement rate for 18-20 year-olds was 61,221 per 100,000 (61.22 percent), peaked in 2011 at 65,242 per 100,000 (65.24 percent) and decreased substantially to 35,002 per 100,000 (35.00 percent) in 2016. From 2009 to 2016, there was a 46 percent decrease in the combined enforcement rate for 18-20 year-olds. For this age group, the raw number of enforcement actions was 17,282 in 2009, followed by a peak of 18,712 in 2011, and then a sharp decline to 10,423 in 2016.

Figure 6: Enforcement Rates for All Age Groups in Louisville from 2009-2016
The enforcement rates for 21-24 year-olds were generally the highest among all age groups. The rate began at 61.1 percent in 2009 increased until 2011, before seeing a slight drop in 2012 to 66.1 percent. The total enforcement rate peaked in 2013 at 70.3 percent, before decreasing slightly in 2014, then dropping off considerably in 2015 (53.5 percent) and finishing at 45 percent in 2016. In terms of raw numbers, the 21-24 age group experienced 23,826 enforcement actions in 2009. This number rose to 28,307 in 2013 followed by a decrease to 18,352 in 2016.

The enforcement rate for 25-34 year-olds followed a similar pattern to the 21-24 age group. The enforcement rate began at 47.36 percent in 2009 and increased until 2012 when there was a slight dip. The enforcement rate peaked in 2013 at 53.74 percent than decreased to 40.47 percent in 2016. The number of enforcement actions for 25-34 year-olds began at 49,091 in 2009, increased to 56,826 in 2013 before dropping off to 43,163 in 2016, which was the lowest number of enforcement actions observed for this age group during the study period.

The 35 and over age group experienced the lowest enforcement rate. In 2009, the enforcement rate was 15.78 percent, peaking in 2013 at 18.15 percent, and decreasing to 13.10 percent in 2016. Overall, the absolute number of enforcement actions for this age group (35 and older) began at 62,183 in 2009, peaked at 72,584 in 2013, and fell to 52,606 enforcement actions in 2016.

It is important to note that the two oldest age groups (25-34 and 35 and older) contain the largest numbers of people compared to the younger age groups (18-20, and 21-24). Therefore, these older age groups will have the greatest number of enforcement actions while having relatively lower enforcement rates.

To compare the total enforcement rates for the three groups we use ratios, with the 35 and older enforcement rate as the base. Again, we look at three time points to discuss the ratios: the beginning of the study period, the 2013 peak in combined enforcement rate, and the end of the study period. In 2009, the enforcement rate was 3.88 times higher for 18-20 year-olds compared to those 35 years and older. This difference decreased to 3.06 in 2013 and 2.67 in 2016.

The pattern for 21-24 year-olds was different from the 18-20 year-olds. In 2009, the enforcement rate for 21-34 year-olds was 3.87 compared to those 35 and older and increased to 4.19 in 2012, then decreased to 3.44 in 2016. The pattern for 25-34 year-olds was more stable. In 2009, the enforcement rate for 25-34 year olds was 3.00 times higher than those 35 and older. In 2011, this ratio decreased to 2.96 percent and then increased to 3.09 in 2016. Overall, the ratios were lower in 2016 than 2009 for the 18-20 year-olds and 21-24 year-olds; however, the 25-34 year-olds saw higher ratios in 2016 than 2009.
Figure 7: Enforcement Rates for Ages 18-20 in Louisville from 2009-2016

Figure 7 depicts the enforcement rates for 18-20 year-olds only. As shown in figure 7, 18-20 year-olds had a higher combined enforcement rate compared to Louisville’s overall enforcement rate from 2009-2016, while the singular enforcement types (felony, misdemeanor arrests and citations, bench warrants, and moving violations arrests and citations were below the overall combined enforcement rate. Notably, all enforcement types for 18-20 year-olds the (both rates and counts) were lower in 2016 than in 2009.

The 18-20 years of ages experienced a substantial drop in the rate of enforcement actions by police from 2009 to 2016. In 2009, the total enforcement rate was 61.22 percent, with a peak of 65.24 percent in 2011 and then a decrease to 35.00 percent in 2016. The overall decrease in combined enforcement rate corresponds to a change in raw counts from 17,282 enforcement actions in 2009 to 10,423 in 2016.

The rate for enforcement actions related to misdemeanors arrests for this age group began at 13.36 percent in 2009, with a similar percentage in 2010. In 2011, the misdemeanor arrest rate was 11.45 percent and then steadily declined to a low of 6.74 percent in 2016. Misdemeanor enforcement arrests for those 18-20 numbered 5,209 in 2009 a peak. These actions declined to 2,748 in 2016.
Misdemeanor citations represented 7.41 percent in 2009, increased to a high of 11.23 percent in 2011 and then declined to 4.14 percent in 2016. Misdemeanor enforcement citations for those 18-20 numbered 2,091 in 2009 and rose to a peak of 3,223 in 2001. These actions declined to 1,234 in 2016.

The rate for moving violation arrests decreased for this age group across the data. Moving violation arrests for those 18-24 was 5.7 percent in 2009 and then gradually but consistently declined until 2016 to 2.14 percent. The raw number of moving violations arrests for this age group was 1,605 in 2009 and ended at 638 in 2016.

Moving violation citations for this age group experienced a different trend. In 2006, they accounted for 16.50 percent. This increased to 23.43 percent in 2011. Moving violation citations for 18-20 year olds fell sharply in 2015 to 15.12 percent and ended at 12.53 percent in 2016. The raw number of moving violation citations issued for this age group was 4,659 in 2009, peaked at 6,719 in 2011, and ended at 3,732 in 2016.

The rate of felony arrests varied across the data. In 2009, the felony arrest rate was 7.19 percent and generally declined until 2015 where the enforcement rate was 3.91 percent. These actions increased in 2016 to 4.31 percent. The corresponding counts for felony arrests started with 2,031 felony arrests in 2009, which was also the peak, and fell to a low of 1,165 in 2015 and finishing with a slight increase of 1,284 in 2016.

Finally, the warrant rate for 18-20 year-olds also experienced an overall decline. In 2009, the rate began at 5.29 percent and saw an overall decrease to 2.29 percent in 2016. The decline was not consistent across the years, as 2013 saw a slightly higher warrant enforcement rate of 3.48 percent than 2012’s rate of 3.14 percent. The number of warrant arrests peaked in 2009 at 1,493 and a low of 681 in 2016.
Figure 8: Enforcement Rates for Ages 21-24 in Louisville from 2009-2016

Figure 8 illustrates the specific and combined enforcement rates for 21-24 year-olds in Louisville from 2009 to 2016. Figure 8 illustrates that 21-24 year-olds experienced a combined enforcement rate higher than Louisville’s overall enforcement rate. In 2009, the combined enforcement rate for 21-24 year-olds was 61.11 percent. The combined enforcement rate peaked in 2013 at 70.37 percent. Beginning in 2014, the combined enforcement rate declined ending at 45.03 percent in 2016. During this time period, 21-24 year-olds experienced 23,826 enforcement actions in 2009, a high of 28,307 enforcement actions in 2013, and a low of 18,352 enforcement actions in 2016.

Twenty-one and to twenty-four year-olds had a moving violation arrest rate of 5.93 percent in 2009 a peak, the rate decreased over the life of the study to end at 2.69 percent in 2009. In 2009, there were 2,313 moving violation arrests for 21-24 year-olds. The number of moving arrests issued rose to 2,331 in 2010 and then fell to 1,097 in 2016.

Moving violations citation rate for this age group was 17.33 percent in 2009. This rate increased until 2014 where it peaked at 25.97 percent. The rate then dropped in 2016 to 15.05 percent. Moving violation citations had the highest rates of enforcement for 21-24 year-olds across the study period. In 2009, there were 6,759 moving citations issued for 21-24 year-olds. The number of moving violations issued rose to 10,354 in 2013 and then fell to 6,133 in 2016.
In 2009, the misdemeanor arrest rate was 16.82 percent and increased to a peak of 17.66 percent in 2010. The rate declined in 2011 and was relatively stable until a declined to 12.04 percent in 2015 and 10.72 percent in 2016. There were 6,558 misdemeanor arrests in 2009. This increased to 6,558 in 2010 and then declined to 4,369 in 2016.

Misdemeanor citations for 21-24 year-olds accounted for 8.74 percent of action in 2009. This rate rose to a high of 13.86 in 2011 and then slowly declined for three years. The rate dropped more substantially in 2015 to 8.31 percent to a low of 6.1 percent in 2009. In 2009, there were 3,408 misdemeanor citations for this group. The number rose to 5,502 in 2011 and declined to 2,486 in 2016.

The warrant arrest rate for 21-24 year-olds was at 6.03 percent in 2009 and decreased until 2013 where it peaked at 6.67 percent. Beginning in 2014 the rate was 5.95 percent and declined to 5.12 percent of enforcement actions in 2016. In 2009 there were 2,350 warrant actions involving 21-24 year olds, decreased until 2013 with a peak of 2,684 and then continued to decrease with 2,088 warrant arrests in 2016.

Finally, the felony arrest rate for 21-24 year-olds began the study period in 2009 at 5.55 percent before declining until 2012. The rate peaked in 2013 at 5.82 percent or 5,819 per 100,000. In 2016, the felony arrest rate declined to 4.64 percent. In terms of raw numbers, there were 2,163 felony arrests in 2009, which peaked at 2,341 in 2013, and subsequently dropped to 1,884 arrests in 2016.
Figure 9 depicts the enforcement rates for 25-34 year-olds only. As shown in figure 9, 25-34 year-olds had a higher combined enforcement rate compared to Louisville’s overall enforcement rate from 2009-2016, while the singular enforcement types (felony, misdemeanor (arrests and citations), warrant, moving violations (arrests and citations) were below the overall combined enforcement rate.

The 25-34 years of ages experienced variation in the rate of combined enforcement actions by police from 2009 to 2016. In 2009, the total enforcement rate was 47.36 percent, with a peak of 53.74 percent in 2013 and then a decrease to 40.47 percent in 2016. The overall decrease in combined enforcement rate corresponds to a change in raw counts for this age group from 49,091 enforcement actions in 2009, a peak of 56,826 actions in 2013, and a low of 43,163 combined enforcement actions in 2016.

The rate for misdemeanors arrests for this age group began at 12.31 percent in 2009, and then increased to 2010 to 12.49 percent. The misdemeanor arrest rate then declined in 2011 and 2012. The rate for misdemeanor arrests was relatively stable in 2013 and 2014 but began to decline in 2015 and ended at a low of 8.88 percent in 2016. There were 12,756 misdemeanor arrests for those 25-34 in 2009, a high of 13,025 arrests in 2011, and a low of 9,471 in 2016.
The misdemeanor citation rate began the study at 6.67 percent in 2009 and increased to a peak of 10.07 percent in 2011. The rate then declined over time to low of 5.49 percent in 2016. There were 6,915 misdemeanor citations in 2009 for those 25-34, a high of 10,551 misdemeanor citations in 2011, and a low of 5,852 in 2016.

The moving violation arrest rate peaked in 2009 at 4.63 percent. This rate then dipped to 2.70 percent in 2012. Moving violation arrests increased in 2013 to 3.21 percent. The rate then fell to a low of 2.24 percent in 2016. Moving violation arrests numbered 4,803 in 2009. The number of such actions dropped to 2,391 in 2016.

The moving violation citation rate started at 13.52 percent in 2009 and increased until 2013, reached a peak of 20.17 percent in 2014, dropped in 2015 and ended at a low of 12.59 percent in 2009. In terms of counts, there were moving 14,016 violation citations in 2009 for this age group. The number rose to 21,423 in 2014 and fell to 13,426 in 2016.

The rate of felony enforcement actions was generally consistent across the data. In 2009, the felony arrest rate was 4.60 percent for 25-34 year-olds and decreased until 2012 where the felony arrest rate was 4.13 percent. The felony arrest rate increased in 2015 to peak of 4.69 percent and then declined to 4.63 percent in 2016. The corresponding counts for felony arrests started with 4,773 felony arrests in 2009, then peaked at 4,998 in 2014 and declined slightly to 4,936 in 2016.

Finally, the warrant rate for 25-34 year-olds also somewhat consistent across the study period. In 2009, the warrant arrest rate was 4.98 percent, declining in the next two years, before increasing in both 2013 and 2014. The warrant rate for this age group then declined in 2015 but rebounded to a high of 5.69 percent in 2016. In terms of raw numbers, there were 5,167 warrant actions in 2009, a subsequent decrease in warrant arrests until 2013 at 5,689, with warrant arrests peaking in 2016 at 6,078.
Figure 10:  
Enforcement Rates for Ages 35 and over in Louisville from 2009-2016

Figure 10 shows the combined enforcement rate for individuals 35 years and older as well as the rates of the individual enforcement actions. The enforcement rates for this age group were substantially lower than for all other age groups. Notably, none of the enforcement rates for this age group was above the overall enforcement rate for Louisville. While the 35 and over age group did experience changes to the enforcement rate, the variations in enforcement rates tended to be less substantial than in other age ranges. In 2009, the combined enforcement rate for those 35 and over was 15.78 percent. The combined enforcement rate peaked in 2013 at 18.15 percent and then decreased to 13.10 percent in 2016.

In terms of counts, there were 62,183 combined enforcement actions in 2009, with a peak of 72,584 actions in 2013, and a low of 52,606 in 2016. This age group experienced higher enforcement counts, as this is the highest populated age category.

Moving violation citations were the largest type of enforcement experienced by those 35 and over in Louisville between 2009 and 2016. The rate for moving violations began at 5.68 percent in 2009 and peaked in 2013 at 8.34 percent, before declining to 5.09 percent in 2016. There were 22,383 moving violation citations issued for those over 35 in 2009, which rose to 33,358 in 2013, and then fell to 20,452 in 2016.
Moving violation arrests rates represented 1.78 percent of enforcement actions in 2009. This rate increased to a peak of 1.88 percent in 2010. The rate then declined to a low of .86 in 2009. Moving violation arrest numbered 7,044 in 2009 and fell to a low of 3,457 in 2016.

The misdemeanor arrest rate was the second highest form of enforcement action against this age group. In 2009, the misdemeanor arrest rate was 3.53 percent, with a peak of 3.54 percent in 2010, and a low of 2.53 percent in 2016. In terms of counts, there were 13,907 misdemeanor arrests in 2009, a high of 14,055 in 2010 and 10,180 such arrests in 2016.

Misdemeanor citations for those over 35 began at 1.77 percent in 2009 and increased to 2.61 percent in 2011. The rate then declined to a low of 1.65 in 2016. Misdemeanor citations for this age group numbered 6,983 in 2009. They increased to 10,412 in 2013 and ended at 6,611 in 2016.

The felony arrest rate and warrant arrest rate were similar for those 35 and over. In 2009, the felony arrest rate was 1.25 percent, a peak. The rate then decreased to a low of .95 percent in 2012. The rate then increased to 1.16 in 2016. There were 4,931 felony arrests in 2009 for this age group. The number declined to 3,799 in 2012 and rose to 4,654 in 2016.

The warrant arrest rate was 1.52 in 2009, which was also the peak. The warrant arrest rate declined until 2013, where the warrant arrest rate was 1.48 percent and then declined the next two years before ending in 2016 at 1.49 percent. In 2009, there were 6,000 bench warrant arrests, a low of 4,419 arrests in 2012, and 6,021 such arrests in 2016.
ENFORCEMENT RATES: ENFORCEMENT TYPE WITH AGE BREAKDOWN

Another way to examine the above numbers is to look at enforcement action by age groups allowing us to clearly examine age-related trends. The figures presented below illustrate trends for each type of enforcement action and include all age groups in Louisville from 2009 to 2016. The figures also include the enforcement rates for all individuals over 18 for that specific enforcement action. For raw numbers and rates regarding specific types of enforcement action, please refer to the section above as they are provided for each group.
Figure 11: Felony Arrest Rates by Age Group in Louisville from 2009-2016

Figure 11 represents the enforcement rates of felony arrests for all age groups. The figure shows that arrest rates for the older demographics, 35 and older and ages 25-34, were relatively stable when compared to the younger demographics of 18-20 and 21-24. The age group 18-20 saw the highest felony arrest rates of all groups in 2009 at 7,194 per 100,000. The 18-20 year-olds saw a low of 3,912 per 100,000 in 2015 before rising to 4,311 per 100,000 in 2016. Overall, the felony arrest rates for 18-20 year-olds show a declining trend, with the exception of 2016, which showed a slight increase.

The age group 21-24 year-olds had the second highest felony arrest rate in 2009 at 5,547 per 100,000. The 21-24 year-olds became the highest felony rates of all groups starting in 2012 at 5,100 per 100,000. The 21-24 age group then peaked in 2013 at 5,819 per 100,000 before declining to 4,622 per 100,000 in 2016.

The 25-34 year-olds started at a felony arrest rate of 4,604 per 100,000 in 2009, which fell to its lowest rate in 2011 at 4,109 per 100,000. The felony arrest rate peaked in 2015 for the 25-34 year-olds at 4,686 per 100,000, and it remained relatively the same rate in 2016 at 4,628 per 100,000. The 35 and older age group showed a stable trend from 2011 to 2016. They had a high of 1,251 per 100,000 in 2009 and a low of 952 per 100,000 in 2012. The 35 and older group was
the only age group that was below the overall felony arrest rate in Louisville through 2009 and 2016.

The 18-20 age group began with the highest felony arrest rates and ended with the second lowest felony arrest rates of all groups, falling under 21-24 year-olds in 2012 and the 25-34 year-olds in 2015.

To compare the felony arrest rate for each age group we use ratios, with the 35 and older felony arrest rate as the base. We use three time points to discuss the ratios: the beginning of the study period, the 2013 peak in combined enforcement rate (for consistency, rather than the specific enforcement activity being discussed), and the end of the study period.

In 2009, the felony arrest rate was 5.75 higher for 18-20 year-olds when compared to those 35 and older. This difference decreased to 4.22 in 2013 and fell even further in 2016 to 3.72. In 2009, the 21-24 age group saw a felony arrest rate that was 4.43 higher than the 35 and older group. This difference increased to 5.25 in 2013 and then decreased to 3.99 in 2016. Finally, the 25-34 year olds felony arrest rate was 3.68 higher than those 35 and older in 2009. This difference increased to 4.05 in 2013 and then decreased to 4.00 in 2016. The youngest group, 18-20 year-olds saw the greatest decrease in enforcement rates between 2009 and 2016, while the enforcement rates remained relatively stable for 21-24 year-olds and 25-34 year-olds compared to those 35 and over.
Figure 12 shows the misdemeanor arrest rates for four age groups. The 18-20 year-old group started in 2009 at 13,359 per 100,000, the peak enforcement rate for this group. The 18-20 year-old bracket then decreased (9,414 per 100,000 in 2012) steadily to a low of 6,742 per 100,000 in 2016.

The 21-24 year-olds started at 16,819 per 100,000 in 2009, then they peaked at 17,657 per 100,000 in 2010, the 21-24 year-olds then showed a lower rate of 10,719 per 100,000 in 2016.

The 25-34 age group data started at 12,305 per 100,000 in 2009, the rate then peaked at 12,490 per 100,000 in 2010, the 25-34 year-olds’ rate then steadily decreased to low point in 2016 at 8,880 per 100,000. Again, those 35 years and older are the only age group below the overall enforcement rate for Louisville, and the age group remains relatively stable starting in 2009 at 3,529 per 100,000 and ending in 2016 at 2,534 per 100,000. Overall all four of the age groups showed a peak in misdemeanor arrest rates in 2010.

To compare the misdemeanor arrest rate for each age group we use ratios with the 35 and older misdemeanor arrest rate as the base. We again use three time points to discuss the ratios: the beginning of the study period, the 2013 peak in combined enforcement rate (for consistency, rather than the specific enforcement activity being discussed), and the end of the study period.
Starting with the 18-20 year-olds they had a ratio 3.78 higher when compared to the 35 and older group in 2009, this ratio decreased slightly to 3.04 in 2013, the ratio then steadily decreased to 2.66 in 2016. The 21-24 year started in 2009 to a ratio of 4.77 enforcement ratio, a rate of 4.88 in 2013 and end in 2016 at a 4.23 enforcement ratio.

The 25-34 year-olds started in 2009 with an enforcement ratio of 3.49, this ratio increased to 3.56 in 2013 and ended in 2016 at a 3.5. Overall, the data shows that the 21-24 year-olds received a higher enforcement ratio than the other age groups; this trend was consistent in every year analyzed.
Figure 13 shows the misdemeanor citation rates for four age groups. The 18-20 age bracket started at 7,407 per 100,000 in 2009, peaked at 11,237 in 2011 and then steadily declined to a low point of 4,144 per 100,000 in 2016.

The 21-24 year-olds started in 2009 with a misdemeanor citation rate of 8,740 per 100,000, their rate peaked in 2011 at 13,862 per 100,000 and then declined to a low of 6,099 per 100,000 in 2016.

The 25-34 year-olds started with a rate of 6,670 per 100,000 misdemeanor citations in 2009, their rate then peaked in 2011 at 10,070 per 100,000. The rate then declined to 5,487 per 100,000 in 2016.

The 35 and above age group is the only age group that falls below the average misdemeanor citation rates for this period and they showed a relatively stable citation rate that started in 2009 at 1,772 per 100,000 and ended at 1,645 per 100,000 in 2016. Every age group in this graph showed peak citation rates in 2011; this includes the 35 and older age bracket.
To compare the misdemeanor citation rate for each age group we use ratios with the 35 and older misdemeanor citation rate as the base. We again use three time points to discuss the ratios: the beginning of the study period, the 2013 peak in combined enforcement rate (for consistency, rather than the specific enforcement activity being discussed), and the end of the study period.

The enforcement ratios show that in 2009 the 18-20 year-olds saw an enforcement ratio of 4.18 times higher than the 35 year and older group, they peaked at a ratio 4.43 in 2010 and steadily declined to an enforcement ratio of 3.47 in 2013 and ultimately to a ratio of 2.52 in 2016.

The 21-24 year-olds had an enforcement ratio of 4.93 in 2009, the ratio declined to 4.71 in 2013 and further declined to end in 2016 to 3.71 times the enforcement rate of the 35 and older group.

The 25-34 year-olds had an enforcement ratio of 3.76 in 2009. It dropped to 3.47 in 2013 and then ended at a low of 3.33 in 2016. The 21-24 age bracket has the highest overall enforcement ratio throughout this period; they were consistently higher than any other age group through all years.
Figure 14 illustrates moving violations arrest rates for four age groups. The 18-20 year-olds peaked in 2009 at 5,685 per 100,000 then their rates declined until 2016 at 2,142 per 100,000.

The 21-24 year-olds also peaked in 2009 at 5,932 per 100,000 then gradually decreased, with the exception of 2013, which saw a small increase to 3,212. The rate for this age group then fell to 2,691 per 100,000 in 2016.

The 24-34 year-olds also saw their peak rate in 2009 at 4,633 per 100,000. The rate then fell in 2013 to 3,212 per 100,000 and further decreased in 2016 to 2,241 per 100,000. Every age group except for the 35+ year-olds saw a peak moving violations arrest rate in 2009. The 35 and above age group saw their peak rate in 2010 at 1,882 per 100,000 and their low in 2016 at 860 per 100,000. All age groups had dramatically lower rates in 2016 than they had in 2009.

To compare the moving violation arrest rates for each age group we use ratios with the 35 and older moving violation arrest rate as the base. We again use three time points to discuss the ratios: the beginning of the study period, the 2013 peak in combined enforcement rate (for consistency, rather than the specific enforcement activity being discussed), and the end of the study period.
The 18-20 year-olds saw an enforcement ratio of 3.18 times higher than the 35+ year-olds in 2009, in 2013 this number decreased to 2.64 and in 2016 the number decreased further to 2.49.

The 21-24 year-olds had a relatively stable enforcement ratio. In 2009, this age group had a ratio of 3.32 times that of those 35 and above. The ratio was similar in 2013 they at 3.33 times that of the oldest age group. In 2016, those 21-24 had a ratio of 3.13.

The 25-34 year-olds had an enforcement ratio of 2.59 in 2009, this decreased to 2.51 in 2013 then decreased further in 2016 to 2.61.

Figure 14 shows generally highest moving violation arrest rates 2009 with a decrease until 2012 where rates had a slight increase across most age groups. All age groups measured then trended down in enforcement rates for moving violation arrests.
Figure 15 shows moving violation citation rates for four age groups. The 18-20 year-olds had a rate of 16,504 per 100,000 in 2009, this peaked at 23,427 per 100,000 in 2011 then declined until 2016 at 12,53 per 100,000 in 2016.

The 21-24 year-olds started in 2009 at a rate of 17,334 per 100,000, their rate then peaked at 25,976 per 100,000 in 2014, and lowered to rate of 15,047 in 2016.

25-34 year-olds had a rate of 13,521 per 100,000 in 2009, their rate then peaked at 20,168 per 100,000 in 2014. Moving violations for 18-20 year olds then decreased to 12,589 per 100,000 in 2016.

The 35-year and older group were below the average moving violation citation rate in Louisville and had a high of 8,340 per 100,000 in 2013 and a low of 7,556 per 100,000 in 2016.

To compare the moving violation citation rate for each age group we use ratios with the 35 and older warrant arrest rate as the base. We again use three time points to discuss the ratios: the beginning of the study period, the 2013 peak in combined enforcement rate (for consistency, rather than the specific enforcement activity being discussed), and the end of the study period.
The enforcement ratio for 18-20 year-olds in 2009 was 2.91 times the enforcement ratio for 35 year-olds, in 2013 the ratio fell to 2.59 and ended in 2016 at 2.46.

The 21-24 year-olds had an enforcement ratio of 3.05 times the enforcement ratio for 35 year-olds in 2009. The ratio similar in 2013 at 3.09 in 2013 but fell slightly to 2.96 in 2016.

The 25-34 year-olds had an enforcement ratio of 2.38 times the enforcement ratio for 35 year-olds in 2009. This ratio was also similar in 2013 at 2.37 times the enforcement ratio for 35 year-olds. In 2016, the ratio increased to 2.47. Once again the 21-24 year-olds show a higher overall enforcement ratio when compared to the other age groups. This is true for every year recorded.
Figure 16 shows bench warrant rates for four age groups in Louisville, Kentucky. The 18-20 year-olds had a rate of 5,288 per 100,000 in 2009, which represented the peak of bench warrant rates for that age group. They also had a rate of 3,481 per 100,000 in 2013 and a rate of 2,286 per 100,000 in 2016.

The 21-24 year-olds had a bench warrant rate of 6,027 per 100,000 in 2009, with a peak of 6,672 per 100,000 in 2013. The rate for warrants then declined to 5,123 per 100,000 2016.

The 25-34 year-olds had a bench warrant rate of 4,984 per 100,000 in 2009, 5,380 per 100,000 in 2013 and a peak rate 5,699 per 100,000 in 2016.

The 35 and older group stayed relatively stable and under the average bench warrant rate for the entire period ranging from 1,107 per 100,000 in 2012 to 1,522 per 100,000 in 2009. Again, the 18-20 group was under the city average in 2016 as was the 35 and older demographic.

To compare the bench warrant rates for each age group we use ratios with the 35 and older warrant arrest rate as the base. We again use three time points to discuss the ratios: the beginning
of the study period, the 2013 peak in combined enforcement rate (for consistency, rather than the specific enforcement activity being discussed), and the end of the study period.

The enforcement ratio for 18-20 year-olds in 2009 was 3.47 times the enforcement ratio for 35 year-olds, in 2013, it was 2.35 and in 2016 the ratio declined to 1.53.

The 21-24 year-olds had an enforcement ratio of 3.96 times the enforcement ratio for 35 year-olds in 2009. This ratio 4.49 in 2013 and then declined to 3.42 in 2016.

The 25-34 year-olds had an enforcement ratio of 3.27 times the enforcement ratio for 35 year-olds in 2009, with a ratio of 3.62 in 2013 and of 3.80 in 2016.

In general, the 21-24 year-olds have higher enforcement rates than the other age groups, this is excluding 2016 when 25-34 year-olds had higher rates. Another trend for this graph is that there were higher enforcement rates in general for the years 2010-2013.
ENFORCEMENT RATES: RACE/ETHNICITY

The figures presented below illustrate the trends in Louisville by race/ethnicity from 2009 to 2016. The following figures include Louisville’s enforcement rate to provide a reference point for the combined enforcement rate for felony arrests, misdemeanor arrests and citations, moving violations and arrests, and bench warrant actions for all individuals over age 18.
Figure 17 shows enforcement totals by race/ethnicity in Louisville from 2009-2016. Black enforcement totals are overall higher than both White and Hispanic enforcement totals in Louisville; as shown in Figure 17. Alternatively, the enforcement totals for Whites was consistently below the overall Louisville enforcement total. The overall rate for Hispanics was greater than the overall enforcement rate total in Louisville in 2009 but declined and was lower than the overall enforcement rate total from 2011 to 2015. The overall rate for Hispanics then increased and was similar to the overall enforcement rate for Louisville in 2016. The overall totals for Blacks and Whites declined in 2015 and 2016 while the overall total for Hispanics remained relatively consistent.

The black total enforcement rate was 53,673 per 100,000 in 2009, peaked at 56,264 per 100,000 in 2010, and ended in 2016 at 40,371 per 100,00. There were 56,520 enforcement actions involving Blacks in 2009, which peaked to 60,291 in 2010, and then fell to a low of 44,008 in 2016.

The Hispanic total enforcement rate was 35,153 per 100,000 in 2009, which was also the highest rate. The enforcement rate then decreased in 2013 to 27,340 per 100,000. Subsequently the rate
declined to a low of 21,412 per 100,000 in 2016. In terms of raw numbers, there were 7,085 enforcement actions involving Hispanics in 2009, a peak, and fell to a low of 4,962 in 2016.

Finally, the White total enforcement rate was 20,324 per 100,000 in 2009, and peaked at 23,479 per 100,000 in 2013 and finished at 16,319 per 100,000 in 2016. In terms of raw numbers, there were 85,337 enforcement activities involving Whites in 2009, peaking at 99,080 in 2013, and then falling to a low of 69,004 in 2016. Louisville is a majority White city, which is the reason White enforcement counts are higher than other race/ethnicity categories. However, using rates the data indicate that Whites had lower enforcement rates across the eight-years under analysis.

To compare the combined enforcement rate for each race/ethnicity we use white total enforcement rate as the base. We use three time points to discuss the ratios: the beginning of the study period, the 2013 peak in combined enforcement rate (for consistency, rather than the specific enforcement activity being discussed), and the end of the study period.

When comparing enforcement rates for Blacks to Whites, we found the difference in enforcement rate was 2.64 times higher for Blacks compared to Whites in 2009. The difference decreased to 2.35 in 2013 and then 2.47 in 2016. Comparing combined enforcement rates of Hispanics to Whites, reveals the Hispanic enforcement rate was 1.73 times higher than the White rates in 2009. In 2013, the ratio decreased to 1.16 and then increased to Hispanics enforcement rate being 1.31 times higher than Whites were in 2016. In both cases (Blacks compared to Whites and Hispanics compared to Whites), the ratios and the gap in enforcement rates was smaller in 2016 than in 2009.
Figure 18: Enforcement Rates for Blacks in Louisville from 2009-2016

Figure 18 shows the combined enforcement rate for Blacks along with enforcement rates for felonies, misdemeanors (citations and arrests), moving violations (arrest and citations), and warrants. The total enforcement rate was discussed in the previous figure, but it is important to note that the Black combined enforcement rate is higher than the overall enforcement rate in Louisville. The overall enforcement rates for Blacks in Louisville started in 2009 at 53,673 per 100,000, it then peaked the next year in 2010 at 56,264 per 100,000. The rate then declined in 2012 to 51,004, rebounded in 2013 and then began to fall ending at 40,371 per 100,000 in 2016.

The rate for misdemeanor citation of Blacks started at 6,200 per 100,000 in 2009, increased to 10,119 per 100,000 in 2011, before dropping in 2012 and then sharply decreased in 2015 to 7,725 per 100,000 and ending in 2016 at a low of 5,833 per 100,000. In terms of raw numbers, misdemeanor citations for Blacks were 6,529 in 2009, peaked at 10,876 in 2011, then dipped to 6,359 in 2016.

The misdemeanor arrest rate for Blacks started at 15,789 per 100,000 in 2009 and peaked at 15,898 per 100,000 in 2011. The rate then generally declined over the data to a low to of 9,931 per 100,000 in 2016. In terms of raw numbers, misdemeanor arrests for Blacks were 16,627 in 2009, peaked at 17,036 in 2010, then dipped to 10,826 in 2016.
In 2009, the Black moving violation citation rate was 6,390 per 100,000. The rate peaked at 6,535 per 100,000 and dropped to 3,225 per 100,000 in 2016. In 2009, there were 11,281 moving violation citations involving Black persons, with a peak of 18,558 violations in 2013, and 11,890 in 2016.

In 2009, there were 6,729 Black moving violation arrest. This number rose to 7,003 in 2010 and fell to 3,516 in 2016. The Black moving violation arrest rate began at 6,390 per 100,000 in 2009. The rate increased in 2010 and then generally fell across time to end at 3,225 per 100,000 in 2016.

The warrant enforcement rates for Blacks started at 7,236 per 100,000 in 2009 and decreased until 2013, where the rate was 6,043 per 100,000. From 2014 to 2016, the rate again decreased from 5,563 per 100,000 to 4,593 per 100,000. Bench warrant actions involving Blacks numbered 7,620 in 2009, a peak and dropped to 5,007 in 2016.

Finally, the felony arrest rates for Blacks began at 6,547 per 100,000 in 2009, a peak. The felony arrest rate then declined until 2012, with an increase in 2013 (5,075 per 100,000) and 2014 (5,292 per 100,000) before decreasing to 5,085 per 100,000 in 2016. There were 6,895 felony arrests of black persons in 2009 and this dipped to 5,543 in 2016, a 19.61 percent decrease.
Figure 19 represents enforcement rates for Hispanics in Louisville from 2009-2016. Hispanic felony arrest rates started in 2009 at 1,786 per 100,000, which was its peak. The rate then steadily declined except for in 2014, when a small increase occurred raising it to 1,291 per 100,000, the rate then decreased to a low of 901 per 100,000 in 2016.

The misdemeanor arrest rate for Hispanics peaked in 2009 at 10,781 per 100,000. The rate then declined until an increase in 2013 (5,060 per 100,000). The rate then declined in 2014 and 2015 to a low in 2016 of 3,232 per 100,000. There were 2,173 misdemeanor arrests of Hispanics in 2009, a peak, and then these enforcement actions declined to 749 in 2016.

Misdemeanor citations started in 2009 at 7,129 per 100,000 and then peaked in 2011 at 8,538 per 100,000. The rate declined to a low of 6,179 per 100,000 in 2016. There were 1,437 misdemeanor citations of Hispanics in 2009, the number peaked at 1,872 in 2014, and then declined to 1,432 in 2016.

The moving violation arrest rate for Hispanics started in 2009 at 5,160 per 100,000, which was its peak, the rate declined until 2013 when there was a slight increase to 1,929 moving violation arrests per 100,000, the rate then fell over the next several years ending at a low of 1,027 per
100,000. In terms of raw numbers, there were 1,040, moving violation arrests in 2009, a peak. The number then dropped across the data to end at 238 in 2016.

The moving violation citation rate for Hispanic in 2009 was 7,928, the rate then peaked in 2014 at 10,523 per 100,000. The rate then declined in 2015 and slightly rebounded to 8,984 per 100,000 in 2016, a rate higher than in 2009. In terms of raw numbers, there were 1,598 moving violation citations in 2009 for Hispanics. This peaked at 2,412 in 2014, and then dropped to 2,082 in 2016.

The bench warrant rate for Hispanics started at 2,183 in 2009, which was a peak, it then hit a low of 843 per 100,000 in 2012, after that it sharply increased to 1,201 per 100,000 in 2013, and it then fell again to 888 per 100,000 in 2016. Warrant actions involving Hispanics numbered 440 in 2009, declined to 187 in 2012 and increased to 206 in 2016.

Except for the years 2009 and 2010 (35,153 per 100,000 and 31,191 per 100,000) Hispanics were below the overall enforcement rate for Louisville. From 2011 to 2016, the Hispanic enforcement rate remained constant.
Figure 20 displays enforcement rates for Whites in Louisville from 2009 to 2016. The overall trend in this data is that White enforcement rates generally are below the average enforcement rates for the city. White total enforcement rates peaked in 2013 at 23,479 per 100,000. The rate then began to decline before hitting a low in 2016 at 16,319 per 100,000.

In 2009, the felony arrest rate for Whites was 1,579 per 100,000 and peaked at 1,658 per 100,000 in 2013 before declining to 1,613 in 2016. The number of felony arrests for Whites was 6,633 in 2009, grew to a peak of 6,999 in 2013, and then dipped to 6,821 in 2016.

White misdemeanor arrest rates were 4,690 per 100,000 in 2009 and peaked at 4,837 in 2010 then declined to 3,454 per 100,000 in 2016. There were 19,694 misdemeanor arrests of Whites in 2009, rising to a peak of 20,339 in 2010, and then declined to 14,607 in 2016.

White misdemeanor citation rate in 2009 was 2,516 per 100,000. This rate peaked in 2011 at 3,692 per 100,000 and then fell to 1,737 per 100,000 in 2016. There were 10,566 misdemeanor citations of Whites in 2009, rising to a peak of 15,543 in 2011, and then declined to 7,348 in 2016.

White moving violation arrests started in 2009 at a rate of 1,929 per 100,000, which was the peak of such arrests. Moving violations for Whites then declined until 2013 when there was a small
rise to 1,419 per 100,000. This rate fell to a low of 853 per 100,000 in 2016. There were 8,101 moving violation arrests in 2009. This number decreased to 3,610 in 2016.

White moving violation citations start in 2009 with a rate of 7,708 per 100,000, this rate peaked in 2013 at 10,453 per 100,000 and remained relatively similar for the following year. The rate then began to decline in 2015 and fell to a low of 6,036 per 100,000 in 2009. There were 32,367 moving violation citations involving Whites in 2009. This number increased to 44,112 in 2013 and declined to 25,525 in 2016.

White bench warrant rates start in 2009 at 1,624 per 100,000. The rate fell to a low of 1,400 per 100,000 in 2012. Unlike most rates report, White bench warrant actions peaked in 2016 at 2,235 per 100,000. There were 6,820 bench warrant actions involving Whites in 2009. This number rose to 8,467 in 2014 and increased again to 9,454 in 2016.
ENFORCEMENT RATES: ENFORCEMENT TYPE WITH RACE/ETHNICITY BREAKDOWN

Another way to examine the above numbers is to look at enforcement action by race/ethnicity groups to examine enforcement type trends. The figures presented below illustrate trends for each type of enforcement action and include all age races/ethnicities in Louisville from 2009 to 2016. The figures also include the enforcement rates for all individuals over 18 for that specific enforcement action. For raw numbers and rates regarding specific types of enforcement action, please refer to the section above as they are provided for each group.
Figure 21 shows felony arrest rates by race/ethnicity. The Black felony arrest rate was 6,547 per 100,000 in 2009, which was also the peak. The rate declined to 5,075 in 2013 and increased slightly by 2016 at 5,084 per 100,000 persons.

The felony arrest rate for Hispanics was 1,785 per 100,000 persons in 2009 and was the peak. The rate fell to 1,166 per 100,000 persons in 2013 and to a low of 901 arrests per 100,000 persons.

White felony arrest rates were generally consistent across the data. The rate was 1,579 per 100,000 in 2009 and peaked in 2013 at 1,658 per 100,000. The rate then fell to a low of 1,325 in 2015 but rebounded to 1,613 per 100,000 in 2016.

To compare the felony arrest rate for each race/ethnicity group we use ratios, with White felony arrest rate as the base. We use three time points to discuss the ratios: the beginning of the study period, the 2013 peak in combined enforcement rate (for consistency, rather than the specific enforcement activity being discussed), and the end of the study period.

In 2009, the felony arrest ratio was 4.14 higher for Blacks when compared to Whites. This difference decreased to 3.06 in 2013 and increased slightly to 3.16 in 2016. In 2009, Hispanics
felony arrest ratio was 1.13 times higher than Whites were; however, in 2013 the ratio dropped to 0.70, which means Whites were more likely to be arrested for felonies than Hispanics. In 2016, the ratio dropped to a low of 0.56.
Figure 22: Misdemeanor Arrest Rates by Race/Ethnicity in Louisville from 2009-2016

Figure 22 shows the misdemeanor arrest rates for race/ethnicity. Blacks started in 2009 with an arrest rate of 15,789 per 100,000 and increased to 15,898 in 2010, the peak enforcement rate for this group. The Black misdemeanor arrest rate dropped to 12,091 per 100,000 in 2013 and reached a low of 9,931 per 100,000 in 2016.

The Hispanic misdemeanor arrest rate was 10,781 per 100,000 in 2009 and dropped to 5,060 per 100,000 in 2013. In 2016, the rate dropped to the lowest point at 3,232 per 100,000.

Finally, the White misdemeanor arrest rate was 4,690 per 100,000 in 2009 and increased to a peak 4,837 per 100,000 in 2010. The rate dropped to 4,341 per 100,000 in 2013. In 2016, the White misdemeanor arrest rate reached a low of 3,454 per 100,000. Overall, all three groups hit their peaks in 2009 or 2010 and eventually decreased to their lowest rate in 2016.

To compare the misdemeanor arrest rates for each age group we use ratios with White misdemeanor arrest rate as the base. We again use three time points to discuss the ratios: the beginning of the study period, the 2013 peak in combined enforcement rate (for consistency, rather than the specific enforcement activity being discussed), and the end of the study period.
The Black misdemeanor arrest rate was 3.37 times higher than Whites were in 2009, but decreased to 2.78 in 2013 before rising slightly to 2.87 in 2016. The Hispanic misdemeanor arrest rate was 2.30 times higher than Whites in 2009, dropping to 1.17 times higher in 2013. In 2016, the Hispanic enforcement ratio was 0.94, meaning the enforcement rate was lower for Hispanics than Whites.
Figure 23 shows the misdemeanor citation rates for race/ethnicity. The Black misdemeanor citation rate was 6,200 per 100,000 in 2009 and peaked at 10,119 per 100,000 in 2011 before dropping to 9,741 per 100,000 in 2013. The misdemeanor citation rate continued to drop to a low of 5,833 per 100,000 in 2016.

The Hispanic misdemeanor citation rate started at 7,129 per 100,000 in 2009, peaked at 8,538 per 100,000 in 2011 and then decreased to 7,920 per 100,000 in 2013. In 2016, the Hispanic misdemeanor citation rate reached a low of 6,179 per 100,000. Finally, the White misdemeanor citation rate was 2,516 per 100,000 in 2009, increased to the peak of 3,692 in 2011 before decreasing to a rate of 3,264 in 2013. In 2016, the White misdemeanor citation rate dropped to 1,737 per 100,000. Overall, the misdemeanor citation rate followed a similar pattern for each race/ethnicity group. Each group peaked in 2010 and reached its’ low point in 2016.

To compare the misdemeanor citation rate for each race/ethnicity we use ratios with White misdemeanor citation rate as the base, using the same three periods: 2009, 2013, and 2016. The enforcement ratios show that in 2009 Blacks misdemeanor citation rate was 2.46 times higher compared to Whites. In 2013, the Black rate was 2.98 times higher than Whites were and increased in 2016 to 3.36 times higher. For Hispanics the enforcement ratio was 2.83 in 2009, the ratio declined to 2.43 in 2013, and the increased to 3.56 in 2016.
Figure 24 illustrates moving violations arrest rates race/ethnicity. The Black moving violation arrest rate was 6,390 per 100,000 in 2009 and peaked at 6,535 in 2010. In 2013, the rate dropped to 4,149 and continued to drop to a low of 3,225 per 100,000 in 2016.

The Hispanic rate was 5,160 per 100,000 in 2009 and fell to 1,929 in 2013. In 2016, the Hispanic moving violation rate dropped to a low of 1,027 per 100,000.

The White moving violation arrest rate was 1,929 per 100,000 in 2009, which was also the peak. In 2013, the rate dropped to 1,419 and decreased to a low of 853 per 100,000 in 2016.

To compare the moving violation arrest rate for each group with the White arrest rate as the base, we use three time points to discuss the ratios: the beginning of the study period, the 2013 peak in combined enforcement rate (for consistency, rather than the specific enforcement activity being discussed), and the end of the study period. The Black moving violation arrest rate was 3.31 times higher than Whites in 2009, decreased to 2.92 times higher in 2013, and increased to 3.78 times higher in 2016. The Hispanic rate was 2.67 times higher than Whites were in 2009, followed by 1.36 in 2013 and 1.20 in 2016.
Figure 25 shows moving violation citation rates across race/ethnicity. The Black rate was 10,712 per 100,000 in 2009 and peaked at 17,167 in 2013. The Black moving violation citation rate decreased to 10,907 in 2016. The Hispanic moving violation citation rate was 7,928 per 100,000 in 2009 and increased to 9,907 in 2013. The Hispanic rate peaked at 10,523 in 2014 before decreasing to 8,984 in 2016. The White rate was 7,708 per 100,000 in 2009 and peaked in 2013 at 10,453 per 100,000. The White moving violation citation rate dropped to a low of 6,036 per 100,000 in 2016.

To compare the moving violation citation rates for each race/ethnicity group, the White rate was used as the base. We again use three time points to discuss the ratios: the beginning of the study period, the 2013 peak in combined enforcement rate (for consistency, rather than the specific enforcement activity being discussed), and the end of the study period.

The enforcement ratio for Blacks was 1.39 times higher in 2009, 1.64 times higher in 2013, and 1.81 times higher in 2016. Hispanics had a 1.03 times higher rate in 2009 before dropping to 0.95 in 2013. In 2016, Hispanics rate was 1.49 times higher than for Whites.
Figure 26: Bench Warrant Rates by Race/Ethnicity in Louisville from 2009-2016

Figure 26 shows bench warrant rates for the race/ethnicity groups in Louisville, Kentucky. Blacks had a peak rate of 7,236 per 100,000 in 2009. The rate decreased to 6,043 in 2013 before reaching a low of 4,593 per 100,000 in 2016. For Hispanics the rate was 2,183 per 100,000 in 2009, decreased to 1,201 in 2013, and decreased again to 888 per 100,000 in 2016. For Whites, the bench warrant arrest rate was 1,624 per 100,000 in 2009. The rate increased to 1,956 in 2013 and peaked in 2016 at 2,235 per 100,000. The White enforcement rate was the only group to increase during the period.

To compare the bench warrant rates for each race/ethnicity group. We again use the white rate as the baseline and 2009, 2013, and 2016 as the time points. The Black bench warrant rate was 4.45 times higher compared to Whites in 2009. In 2013 the ratio decreased to 3.09 and reached a low of 2.05 in 2016. The Hispanic ratio was 1.34 in 2009 and decreased to 0.61 in 2013 and 0.40 in 2016. In 2013 and 2016, the Hispanic rate was lower than for Whites.
MALE ENFORCEMENT RATES: AGE AND RACE/ETHNICITY

The figures presented below illustrate trends in Louisville for males by age and race/ethnicity from 2009 to 2016. We do not present the rates for females in the interest of space and because they experienced the least amount of variation during the study period. Notably, the black dotted line or the Louisville enforcement rate in subsequent graphs (Figure 19-22) includes enforcement actions of felony arrests, misdemeanor arrests and citations, moving violations and arrests, and bench warrant actions all individuals over age 18.
Figure 27 shows the enforcement rates by race/ethnicity for 18-20 year-old males. The enforcement rate for 18-20 year old Blacks was consistently the highest compared to Hispanics and Whites. The Black enforcement rate began 152.4 percent (152,400 per 100,000) and then rose to 155.71 percent (155,710 per 100,000) in 2010 before declining the next six years to a low of 85.9 percent (85,900 per 100,000) in 2016. This represents a 43.6 percent decrease over eight years. In terms of raw numbers, there were 5,476 enforcement actions in 2009, a peak of 5,710 actions in 2010 and a low of 3,200 actions in 2016.

The combined enforcement rate for 18-20 Hispanic males was the second highest in 2009 at 71.69 percent. The rate then dropped to 61.97 percent in 2010 before increasing to 65.67 percent in 2011. The following years saw fluctuation until 2013 when the rate dipped to 46.41 percent when the enforcement rate declined and then to 41.75 percent in 2016. The enforcement rate between 2010 and 2014 dropped below the White male enforcement rate, but in 2015 and 2016 was higher. The rates correspond to a Hispanic combine enforcement count of 576 in 2009 and 367 in 2016.
White males in this age group had the lowest starting enforcement rate at 69.58 percent, this increased to a peak in 2011 of 76.17 percent to surpass the Hispanic male enforcement rate. The enforcement rate decreased to 34.26 percent in 2016. Overall, the White male enforcement rate had the lowest beginning and end rate. These rates correspond to 6,383 actions in 2009, a peak of 7,021 actions in 2011, and a low of 3,266 in 2016.

To compare the combined enforcement rate for 18-20 males for each Race/Ethnicity category, we use the White male enforcement rate as the base. We use three time points to discuss the ratios: the beginning of the study period, the 2013 peak in combined enforcement rate (for consistency, rather than the specific enforcement activity being discussed), and the end of the study period.

When comparing rate differences as a ratio for Black to White males (ages 18-20) we found that the enforcement rate for Blacks was 2.19 times higher than for Whites in 2009. This difference decreased to 1.78 in 2013 and then increased to 2.51 times higher than for Whites in 2016. The analysis comparing the Hispanic male enforcement rate for this group was 1.03 times higher than for Whites in 2009, decreased to 0.78 in 2013, and peaked at 1.22 times higher in 2016. The analyses indicates the gap in enforcement rates was at its highest point in 2016.
Figure 28: Enforcement Rates for Males Ages 21-24 by Race/Ethnicity in Louisville from 2009-2016

Figure 28 shows the enforcement rates for 21-24 year-old males by race/ethnicity. Similar to 18-20 year-olds, the Black male enforcement rate was considerably higher than the Hispanic or White rates. In 2009, the enforcement rate was 174.0 percent (174,000 per 100,000) and increased to the peak rate of 189.85 percent (185,850 per 100,000) in 2010. The Black male enforcement rate decreased to 182.56 percent in 2012 before increasing to 185.51 percent in 2013. From 2014 to 2016, the rate dropped from 183.82 percent to 142.11 percent. Black males experienced 6,620 enforcement actions in 2009, a peak of 7,366 enforcement actions in 2010, and a low of 5,622 enforcement actions in 2016.

The 21-24 year-old Hispanic males had the second highest starting rate at 97.03 percent. The rate then decreased considerably until 2013 (55.84 percent) before increasing in 2014 (60.34 percent), decreasing in 2015 (37.73 percent) and increasing again in 2016 (43.40 percent). In 2016, the Hispanic male enforcement rate for 21-24 year olds surpassed the White enforcement rate. The rates correspond to 1,340 enforcement actions in 2009 and a low of 606 enforcement actions in 2015. Finally, there were 697 enforcement actions in 2016.
Rates for White 21-24 year-old males started at the lowest rate of 65.97 percent in 2009, but then increased and peaked in 2013 at 72.70 percent. From 2014 to 2016, the enforcement rate declined ending at 40.89 percent. Between 2010 and 2015, the White male enforcement rate was higher than the Hispanic male rate, but ended with the lowest enforcement rate in 2016. In terms of raw numbers, White males had 8,674 enforcement actions in 2009, a high of 9,731 enforcement actions in 2013, and a low of 5,511 enforcement actions in 2016.

Here we calculated ratios between rates using 21-24 White males as the baseline. In 2009, the enforcement rate for 21-24 year-old black males was 2.64 times higher than for Whites. This decreased to 2.55 in 2013 before increasing to 3.48 in 2016. The 21-24 year-old Hispanic male enforcement rate was 1.47 times higher than that of White males in 2009, but this also decreased in 2013 to 0.77, which means the Hispanic male rate was lower than the White male rate. In 2016, the enforcement rate was 1.06 times higher for Hispanic males than for White males. Similar to 18-20 year-old Black males, the enforcement rate gap is increasing for 21-24 year-old Black males in 2015 and 2016. Hispanic males began to see an increase in increase in the enforcement gap in 2016.
Figure 29 shows the enforcement rates by race/ethnicity for 25-34 year-old males. As before, the enforcement rate for Blacks was consistently the highest compared to Hispanics and Whites. The Black enforcement rate began at 143.09 percent and then rose to 151.07 percent in 2010 before declining to a low of 113.46 percent in 2016. This represents a 20.7 percent decrease over eight years. In terms of raw numbers, there were 13,344 enforcement actions in 2009, 14,288 in 2010, and a low of 10,919 in 2016.

The combined enforcement rate for 25-34 year-old Hispanic males was the second highest in 2009 at 74.11 percent. The rate then dropped between 2010-2012, before increasing in 2013 and then declining from 204-2016. In 2016, the enforcement rate was 35.97 percent. In 2009 and 2010, the Hispanic male enforcement rate was higher than the white male rate, but dropped and stayed below the white male enforcement rate. The rates correspond to a Hispanic combine enforcement count of 2,583 in 2009 and 1,405 in 2016.

White males in this age group had the lowest starting enforcement rate at 50.17 percent, then increased to 51.66 percent in 2010 and peaked at 56.31 percent in 2011 to surpass the Hispanic male enforcement rate. The enforcement rate briefly decreased in 2012 to 50.23 percent, and
then increased in 2013 and 2014. In 2015, the rate again decreased and in 2016, the enforcement rate was 41.43 percent. In terms of raw numbers, there were 18,116 enforcement actions in 2009, 20,347 in 2011, and 15,071 in 2016.

In regards to differences in rates, the enforcement rate for 25-34 year-old black males was 2.85 times higher in 2009, decreasing to 2.58 times higher in 2013, and then increasing to 2.73 times higher in 2016. The largest gap in enforcement rates appeared in 2015, where Black males’ enforcement rate was 3.05 times higher than White males. The analysis comparing the Hispanic male enforcement rate for this group was 1.48 times higher than for White males in 2009. In 2013, the Hispanic male enforcement ratio was 0.78, which means the White male enforcement rate was higher than Hispanic males; a similar pattern occurred in 2016 where the Hispanic male enforcement rate was 0.87 and again lower than White males. Unlike previous age groups, the Black male enforcement rate gap is lower than in 2009, and is trending downwards. Further, the Hispanic male enforcement rate is less than the white male enforcement rate for 25-34 year-olds.
Figure 30: Enforcement Rates for Males Ages 35 and over by Race/Ethnicity in Louisville from 2009-2016

Figure 30 shows the enforcement rates for persons 35 and older by race/ethnicity. Similar to the other three age categories, Black males had the highest enforcement rates; however, as a whole the enforcement rates for these age groups were lower than previous age categories. In 2009, the Black male enforcement rate was 55.73 percent and peaked at 57.63 percent in 2010. The enforcement rate fluctuated between 2011 and 2013 before declining to 39.74 percent in 2016. Black males experienced 16,859 enforcement actions in 2009, a peak of 17,807 enforcement actions in 2010, and a low of 12,450 enforcement actions in 2016.

Hispanic males 35 years-old and over had the second highest start rate at 29.71 percent and then decreased to 26.33 percent in 2013. The rates fluctuated in subsequent years before ending at 22.16 percent in 2016. During the eight-year study period, the Hispanic male enforcement rate remained higher than the White male enforcement rate. The rates correspond to 1,657 enforcement actions in 2009, 1,789 actions in 2014, and 1,431 enforcement actions in 2016.

Rates for White males 35 and older males started at the lowest rate of 17.75 percent in 2009, but then increased and peaked in 2013 at 19.71 percent. From 2014 to 2016, the enforcement rate declined ending at 14.81 percent. The White male rate remained the lowest enforcement rate.
across the eight-year study period. In terms of raw numbers, White males had 25,115 enforcement actions in 2009, a high of 28,040 enforcement actions in 2013, and a low of 21,084 enforcement actions in 2016.

With regard to differences in rates, the enforcement rates for 35 and older Black males was 3.14 times higher than for White males in 2009. This decreased to 2.79 in 2013 and ended at 2.68 in 2016. Similar to the 25-34 year-old Black males, the enforcement gap began to rise in 2015 before decreasing in 2016. The Hispanic male enforcement rate was 1.67 times higher than White males were in 2009 and decreased to 1.34 times higher in 2013, but increased to 1.50 times higher in 2016. The enforcement rate gap remains the highest for Black males but is trending downward; meanwhile, the enforcement rate gap for 35 and older Hispanic males increased from 2015 to 2016.
CONCLUSION

This report examined a variety of enforcement actions—felony arrests, misdemeanor arrests, misdemeanor citations, bench warrant arrests, moving violation arrests and moving violation citations involving the people of Louisville and Louisville Metro Police Department. The objective of this report was to gain a more comprehensive understanding of the combined volume of these enforcement activities and to gauge their trends over the course of eight years.

In concluding, we highlight our six take-home messages from this report:

1. The overwhelming majority (91.9 percent) of enforcement actions from 2009-2016 were for non-felony offenses.
2. The moving violation citation rate was consistently the highest enforcement rate, followed by misdemeanor arrests, misdemeanor citations, bench warrant arrests, felony arrests, and moving violation arrests.
3. Total enforcement rates have decreased the past three years following the enforcement rate peak in 2013. The 2016 enforcement rate was lower than in 2009.
4. Demographic trends in enforcement varied. Over the eight-year period, 18-20 year-olds and Hispanics experienced the greatest amount of fluctuation in enforcement rates. Alternatively, enforcement rates for the remaining demographic groups were relatively constant.
5. There were differences in enforcement activity between the demographic groups. Men had higher rates compared to women; youngest age groups had higher rates than older age groups; and Blacks and Hispanics had higher rates compared to Whites. However, each gap is lower in 2016 than in 2009.
6. Compared to New York City, Louisville had higher total enforcement rates in 2014. Similar to Louisville, 95.1 percent of NYC enforcement actions were for non-felonies. Finally, Louisville had smaller enforcement gaps between sexes, age groups, and racial/ethnic groups compared to NYC.

The analyses presented in this report provide information about trends in law enforcement observed in Louisville, KY. In particular, the study focuses on the enforcement trends related to Louisville Metro Police Department, the largest agency in Louisville, KY. As with any study or report, there are certain limitations that merit discussion. First, we did not compare Louisville enforcement activities to those of any other urban areas. Therefore, conclusions drawn from this report should only be used to inform discussions about policing actions in Louisville.

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13 Misdemeanor Justice Project’s enforcement report showed that since 2011 the overall enforcement rate plummeted due to drastic decrease in stop-question-and-frisks. In 2014, the NYC enforcement rate was 11,124 per 100,000 while Louisville’s enforcement rate was 29,610 per 100,000. The New York report did not account for moving violation citations, which was the highest enforcement activity in Louisville.

14 For instance, New York City enforcement rate was 6.8 times higher for Blacks compared to Whites and 6.7 times higher for males compared to females. As noted in the report, Louisville’s enforcement rate was 2.40 times higher for Blacks compared to Whites and 2.42 times higher for males compared to females.
Additionally, the data provided involve only the Louisville Metro Police Department (LMPD). While by far the largest law enforcement agency in the jurisdiction, there are a variety of smaller agencies that engage in service to smaller municipal sub-units or special entities (e.g., Universities or airports). Our data does not include these agencies and therefore our report cannot account for all law enforcement actions with in the boundary of Louisville. Second, we were not able to analyze any data at the individual level. As a result, we were unable to analyze the number of people with multiple contacts with law enforcement versus people who seldom encounter the police. It is possible that a relatively small number of people could be accounting for a substantial proportion of law enforcement activities presented in this report. Unfortunately, we had no way of accounting for this in the available data. Third, we are unable to document all enforcement activity including traffic stops, as the data was unavailable. Last, we did not examined enforcement actions for persons under the age of 18. While certain minors are charged as adults, we did not include anyone under 18 years-old in the study.

This is the first report examining Louisville’s criminal justice system as part of the Research Network for Misdemeanor Justice at John Jay College. In subsequent reports, we will examine outcomes for misdemeanor and felony arrests in terms of sentencing and disposition. We will also be analyzing trends in admissions to Louisville Metro Correction jail as well as trends in the custodial population of Louisville Metro Corrections. Together, we hope that this report, along with future work and research reports will aid criminal justice policy makers by providing an empirical framework for discussions regarding the operation of criminal justice in Louisville. As the national discussion continues to discuss the impact and operation of the criminal justice system, the proper exercise of police powers, and the relationship between the police and the communities they serve; we look forward to engaging with other researchers and policy makers who are looking carefully at the best ways examine the operationalization of justice in our society.