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on COVID-19 and
Criminal Justice

Pandemic, Social Unrest, and Crime in U.S. Cities

November 2020 Update

PREPARED FOR THE COMMISSION BY

RICHARD ROSENFELD

Curators' Distinguished Professor Emeritus of Criminology and Criminal Justice,
University of Missouri - St. Louis

ERNESTO LOPEZ

Graduate Research Assistant, University of Missouri — St. Louis

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ABOUT THE AUTHORS

Richard Rosenfeld is the Curators' Distinguished Professor Emeritus of Criminology and Criminal Justice at the University of Missouri - St. Louis. His research focuses on crime trends and crime control policy. Professor Rosenfeld is a Fellow and former President of the American Society of Criminology.

Ernesto Lopez Jr. is a graduate research assistant at the University of Missouri – St. Louis.

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Summary

- + **This study updates the authors' previous studies¹² for the National Commission on COVID-19 and Criminal Justice with additional crime data through the end of October 2020.** The current study examined crime rates for ten different offenses in 28 American cities during the COVID-19 pandemic and social unrest over police violence. Not all cities reported data for each offense.
- + **With the exception of a brief spike in non-residential burglary, property and drug crime rates fell during the first eight months of the pandemic.** Residential burglary, larceny, and drug offense rates dropped by 24%, 24%, and 32% from the same period in 2019.
- + **Homicides, aggravated assaults, and gun assaults rose significantly beginning in late May and June of 2020.** Homicide rates increased by 42% during the summer and 34% in the fall over the summer and fall of 2019. There were 610 more homicides in the summer and fall of 2020 than during the same period in 2019. Aggravated assaults went up by 15% in the summer and 13% in the fall of 2020; gun assaults increased by 15% and 16%.
- + **Domestic violence increased during the pandemic, but the increase was not significantly greater than the year before.** This result is based on just 12 of the 28 cities and should be viewed with caution.
- + **In our view, subduing the pandemic, pursuing crime-control strategies of proven effectiveness, and enacting needed police reforms will be necessary to achieve durable reductions in violent crime in our cities.**

¹ Rosenfeld, Richard and Ernesto Lopez. 2020. Pandemic, Social Unrest, and Crime in U.S. Cities. Washington, D.C.: Council on Criminal Justice (July).

² Rosenfeld, Richard and Ernesto Lopez. 2020. Pandemic, Social Unrest, and Crime in U.S. Cities: August Update. Washington, D.C.: Council on Criminal Justice (September).

Introduction

This report updates our previous studies of crime changes during the COVID-19 pandemic and the social unrest sparked by the killing of George Floyd by a Minneapolis police officer on May 25, 2020. The current study extends the crime data to October of 2020. The results are based on ten violent, property, and drug offenses in a sample of 28 United States cities. The results are generally consistent with those of the previous studies, which ended in June and August of 2020, and our conclusions have not changed. Long lasting reductions in violent crime will require subduing the pandemic, pursuing effective crime control strategies, and enacting needed reforms to policing.

Detailed discussion of the rationale for the research, research design, and conclusions can be found in the June 2020 study. In this report, we summarize the data, our methods, and the findings from the updated study.

CITIES OF FOCUS

In the current study, we examine weekly changes in ten different criminal offenses for 28 cities (listed in the Appendix) between January of 2017 and October of 2020, a total of 199 weeks. Baltimore has been added to the city sample used in the October 2020 study. The mean population of the sample is approximately 866,000. Los Angeles is the largest city in the sample, with 3.96 million residents, and St. Petersburg is the smallest, with 259,000 people.

We assess changes over time in the following offenses: homicide, aggravated assault, gun assault, domestic violence, robbery, residential burglary, nonresidential burglary, larceny, motor vehicle theft, and drug offenses. The crime data were obtained from the online portals of city police departments providing weekly data for the 199-week time period. Not all of the cities reported data for each of the crimes, and offense classifications varied somewhat across the cities. Not all cities reported complete data for the final week of October 2020, the end of the observation period. The crime rates for that week are provisional and should be viewed with caution.

STRUCTURAL BREAKS

Structural breaks denote a statistically significant change in the average level or rate of change in a time series, in this case weekly crime rates between January 2017 and October 2020. The structural break procedure used here assumes the break point is unknown and allows the model to estimate the significant break in the series. Because street crimes tend to rise and fall with seasonal changes, the estimates are adjusted for seasonal effects in the crime data.

*The **vertical red lines** throughout this report indicate the points at which structural breaks occur in the data.*

Results

The offense counts were converted to weekly crime rates per 100,000 city residents for analysis. “Structural breaks” methodology was used to estimate statistically significant changes in crime rates over time. This report proceeds by describing the average change over time for the sample in weekly crime rates for each of the ten offenses.

HOMICIDE

Figure 1 displays the average weekly homicide rate in the 21 cities for which homicide data were available (see Appendix). There appears to be a rough cyclical pattern in the homicide rate over time. The model estimated a structural break at the end of May 2020, after which the homicide rate increased sharply through July. It then dropped through the end of October, though not to the level during the same period the year before. The average city homicide rate during the pandemic (March to October of 2020) increased by 32% over the same period the year before (see Figure 2).³ The homicide rate between June and August of 2020 (labeled “Summer” in Figure 2) was 41.9% higher than during the same months in 2019, and it was 34.2% higher in September and October (labeled “Fall”). There were 610 more homicides in the 21 cities in the summer and fall of 2020 than during the same period in 2019. Year-to-date (January to October), the homicide rate was 29% higher in 2020 than in 2019.

KEY TAKEAWAY

In 2020 homicide was 32% higher during the pandemic, 42% higher during the summer, and 34% higher during the fall than in 2019. There were 610 more homicides in the summer and fall of 2020 than during the same period in 2019. Year-to-date (January – October), homicide was 29% higher than the year before.

³ The final week of October is not included in the calculation of the year-over-year percentage change for homicide and the other offenses.

**Figure 1. Weekly Homicides per 100,000 City Population
January 2017 - October 2020**

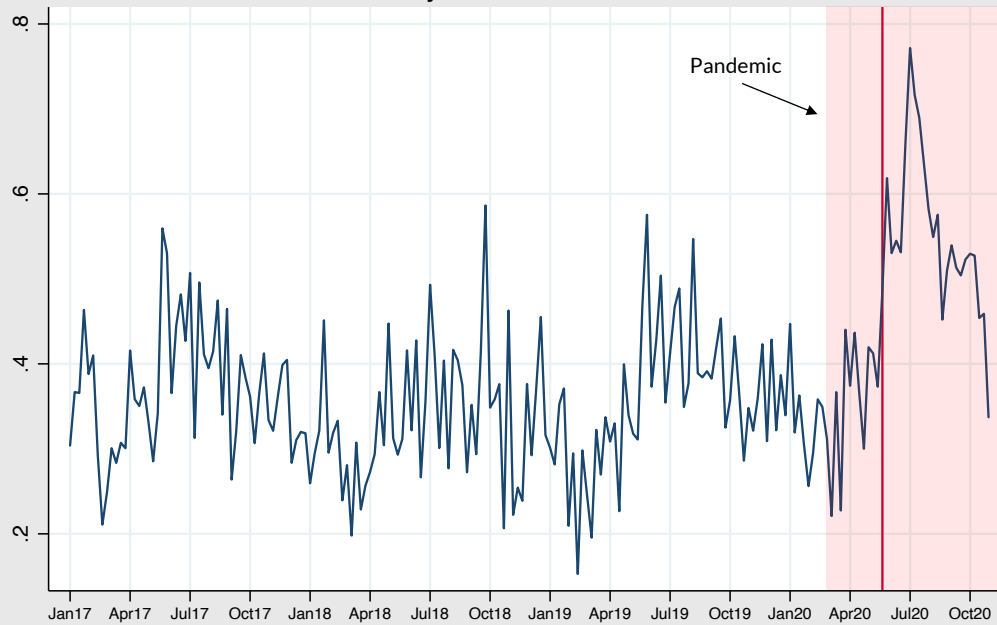
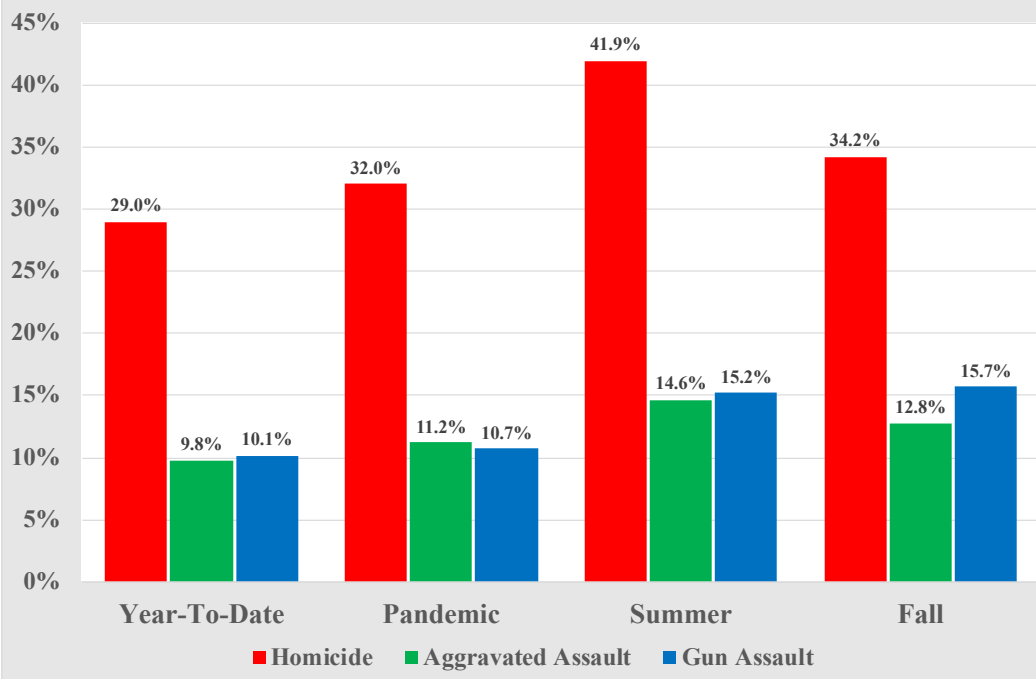
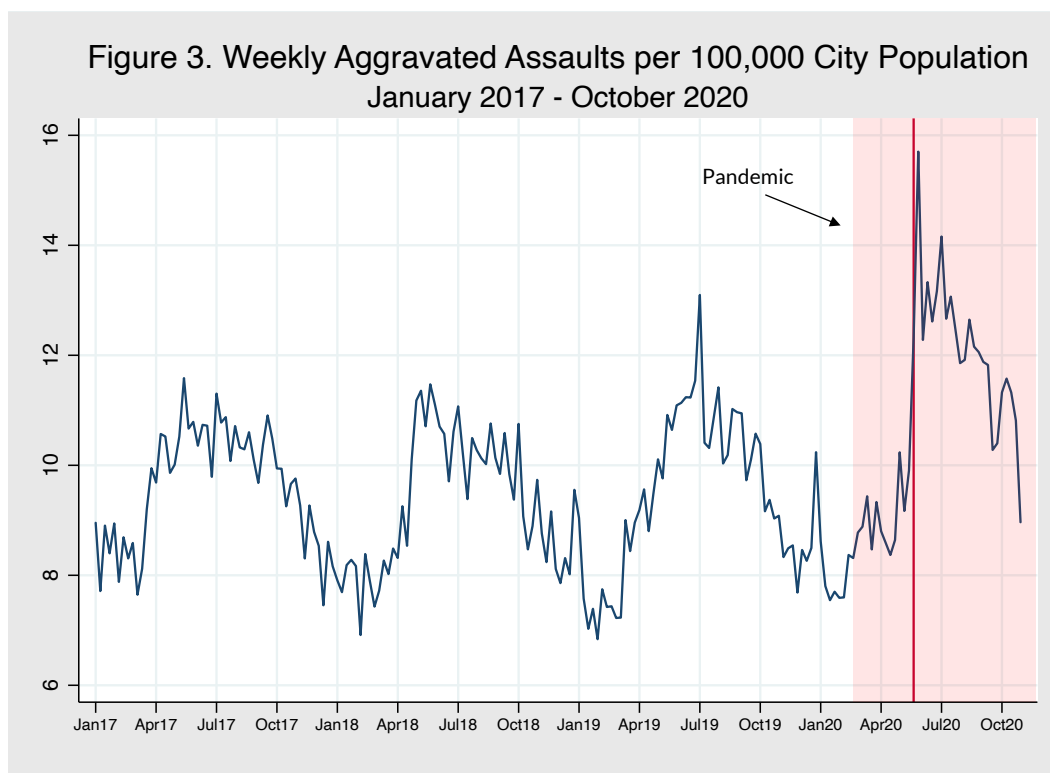


Figure 2. Percentage Change in Homicide, Aggravated Assault, and Gun Assault Rates, 2019 - 2020



AGGRAVATED ASSAULT

Aggravated assaults are assaults committed with a deadly weapon or those that result in or threaten serious bodily injury to the victim. The weekly aggravated assault rate in the 19 cities with available data exhibited a clear cyclical pattern over time, rising during the late spring and summer months and falling during the fall and winter. The model estimated a structural break in the series in early June 2020. (As noted earlier in this report, the structural break model adjusts the estimate for seasonal effects.) The aggravated assault rate rose sharply through June and then decreased through the end of October, though not to the level seen during the same period the year before. As shown in Figure 2, the average city aggravated assault rate during the pandemic (March to October) increased by 11.2% over the same eight-month period in 2019. It was 14.6% higher during the summer (June to August) and 12.8% higher in the fall (September to October) than in the summer and fall of 2019. Year-to-date (January to October), aggravated assault increased by 10.1% over the same 10-month period in 2019.

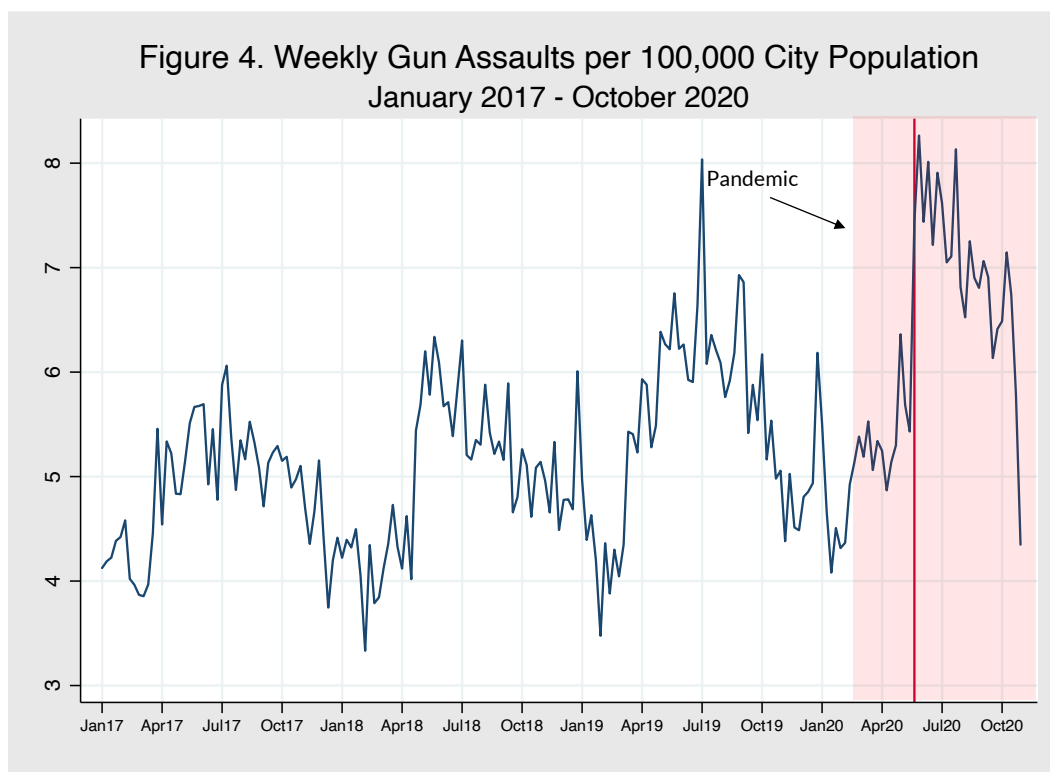


KEY TAKEAWAY

In 2020 aggravated assault was 11% higher during the pandemic, 15% higher during the summer, and 13% higher during the fall than in 2019. Year-to-date (January – October), aggravated assault was 10% higher than the year before.

GUN ASSAULT

Gun assaults are aggravated assaults committed with a firearm. The weekly gun assault rate for the 18 cities with available data moved cyclically over time and exhibited a structural break in early June of 2020. The average city gun assault rate during the pandemic increased by 10.7% over the same eight-month period in 2019 (see Figure 2). The gun assault rate was 15.2% higher during the summer (June to August) and 15.7% higher during the fall (September to October) of 2020 than in the summer and fall of 2019. Between January and October, the gun assault rate was 10.1% higher in 2020 than in 2019.



KEY TAKEAWAY

Gun assault rose by 11% during the pandemic (March – October), 15% during the summer, and 16% during the fall of 2020 over the same periods the year before. Year-to-date (January – October), gun assaults were up 10% over the same period in 2019.

A Closer Look at Homicide and Serious Assault

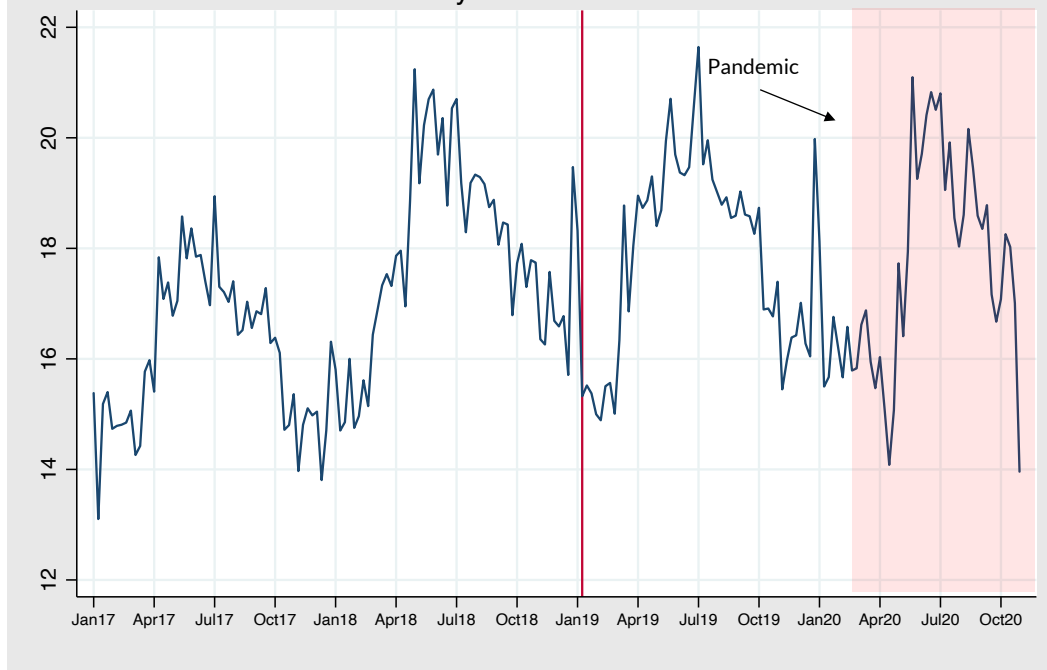
There are both similarities and differences between the changes in the city homicide and assault rates in 2020. The key similarity is that we observed a significant increase for both crimes in late May and early June over the same period in 2019. A notable difference is that the percentage change in homicide rates was roughly three times greater than the change in the aggravated assault and gun assault rates.

Homicides and serious assaults, especially those committed with a firearm, typically track one another quite closely. Moreover, the growth in homicide over the previous year began before the late spring of 2020 (see Appendix Figure A1). As early as January of 2020, the average city homicide rate was running 10% to 30% higher than the year before. The homicide rate dipped somewhat during the first few months of the pandemic, but it was still about 20% higher than during the same period in 2019. By contrast, compared with the year before, nonlethal assault rates fell as the pandemic took hold in April and May of 2020.

DOMESTIC VIOLENCE

Domestic violence consists primarily of aggravated and so-called simple assaults, those committed without a dangerous weapon or serious bodily injury to the victim. The model estimated a structural break in the domestic violence series in January 2019. The weekly domestic violence rate during the pandemic was about the same as the year before. These results must be viewed with caution, however, because we were able to obtain domestic violence data from only 12 of the 28 cities included in our analysis.

Figure 5. Weekly Domestic Violence Incidents per 100,000 City Population
January 2017 - October 2020



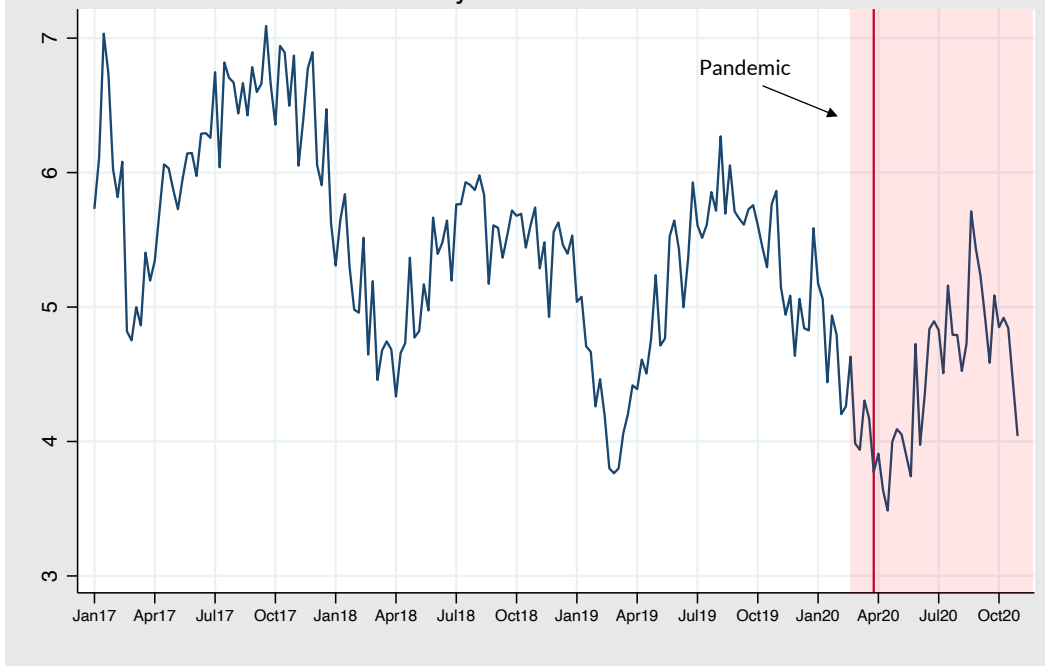
KEY TAKEAWAY

Domestic violence was not significantly greater during the pandemic than in previous years. This result must be viewed with caution because it is based on just 12 cities.

ROBBERY

Robberies are thefts committed with force or the threat of force. The average weekly robbery rate in the 25 cities with available data exhibited a downward cyclical trend from January of 2017 through October 2020. Robbery rates fell significantly at the beginning of the pandemic and then rose in May through the end of the summer, only to drop again in the early fall of 2020. Overall, robbery rates were 13.8% lower during the pandemic (March to October) than during the same eight-month period in 2019.

Figure 6. Weekly Robberies per 100,000 City Population
January 2017 - October 2020



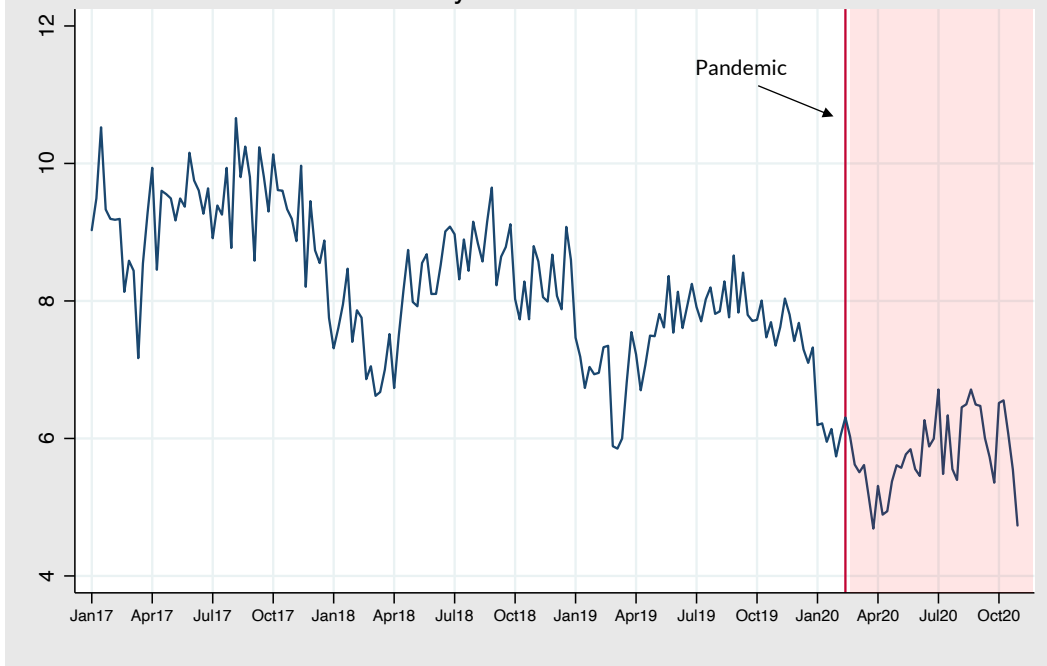
KEY TAKEAWAY

Robbery was 14% lower during the pandemic than the year before.

RESIDENTIAL BURGLARY

Burglaries involve breaking and entering a residential or commercial premise for the purpose of committing a crime. The weekly residential burglary rate has exhibited a downward cyclical trend since January 2017. We observe a further statistically significant decline in residential burglary coinciding with the beginning of the pandemic in late winter 2020. With some weekly fluctuation, the residential burglary rate remained flat through the end of October. The average residential burglary rate during the pandemic was 23.8% lower than during the same eight-month period the year before.

Figure 7. Weekly Residential Burglaries per 100,000 City Population
January 2017 - October 2020



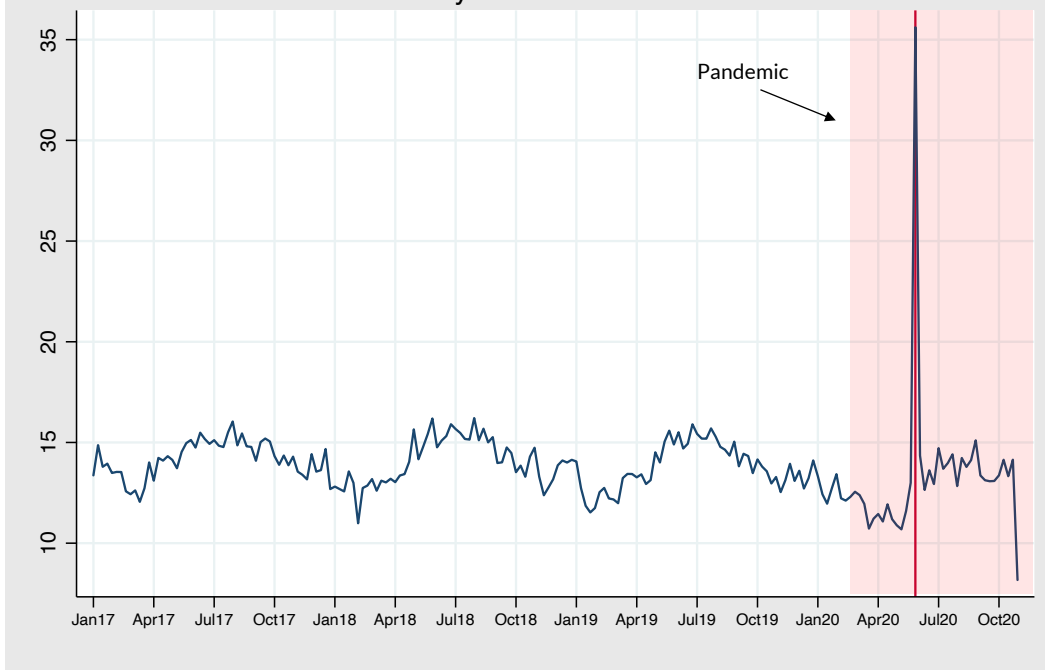
KEY TAKEAWAY

Residential burglary was 24% lower during the pandemic than the year before.

NONRESIDENTIAL BURGLARY

Nonresidential burglaries abruptly increased during the first week of June 2020 in the 17 cities with available data and decreased to typical levels the following week. The brief spike in nonresidential burglary coincided with the emergence of mass protests against police violence in many cities. The notable drop in nonresidential burglaries at the end of October 2020 is based on preliminary data and should be viewed with caution.

Figure 8. Weekly Nonresidential Burglaries per 100,000 City Population
January 2017 - October 2020



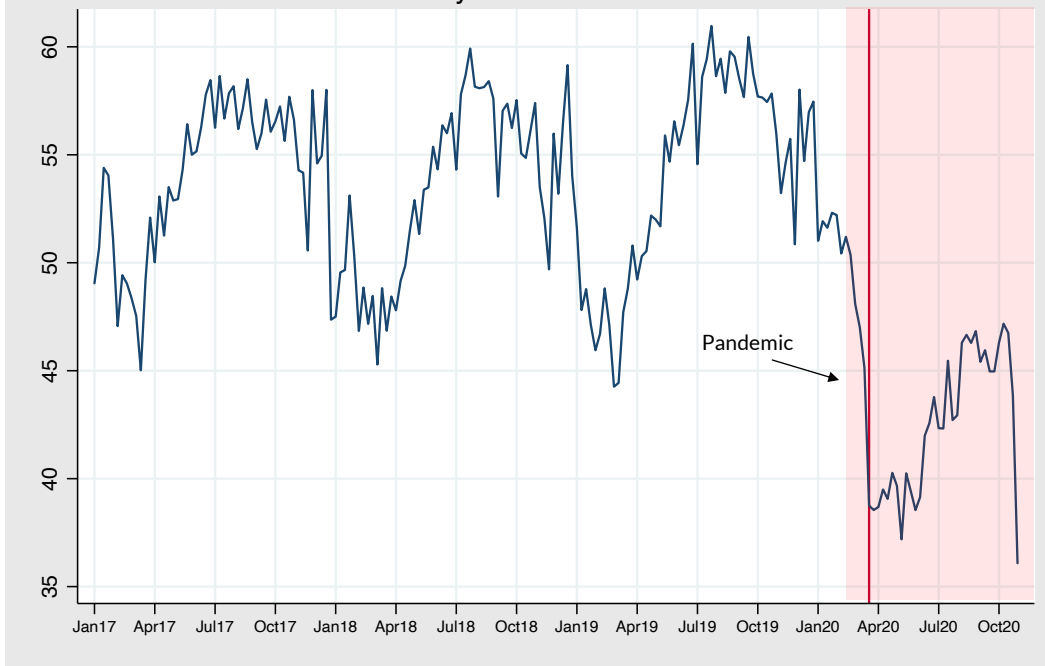
KEY TAKEAWAY

Nonresidential burglary spiked during the first week of June 2020 and then returned to normal levels.

LARCENY

Larcenies are thefts unaccompanied by force or breaking and entering. The weekly larceny rate exhibits a pronounced cyclical pattern over time. The larceny rate in the 23 cities with available data decreased in the spring of 2020 and rose during the next several months. The large drop at the end of October 2020 is based on preliminary data and should be viewed with caution. Overall, the larceny rate between March and October 2020 decreased by 24.1% over the same period in 2019.

Figure 9. Weekly Larcenies per 100,000 City Population
January 2017 - October 2020



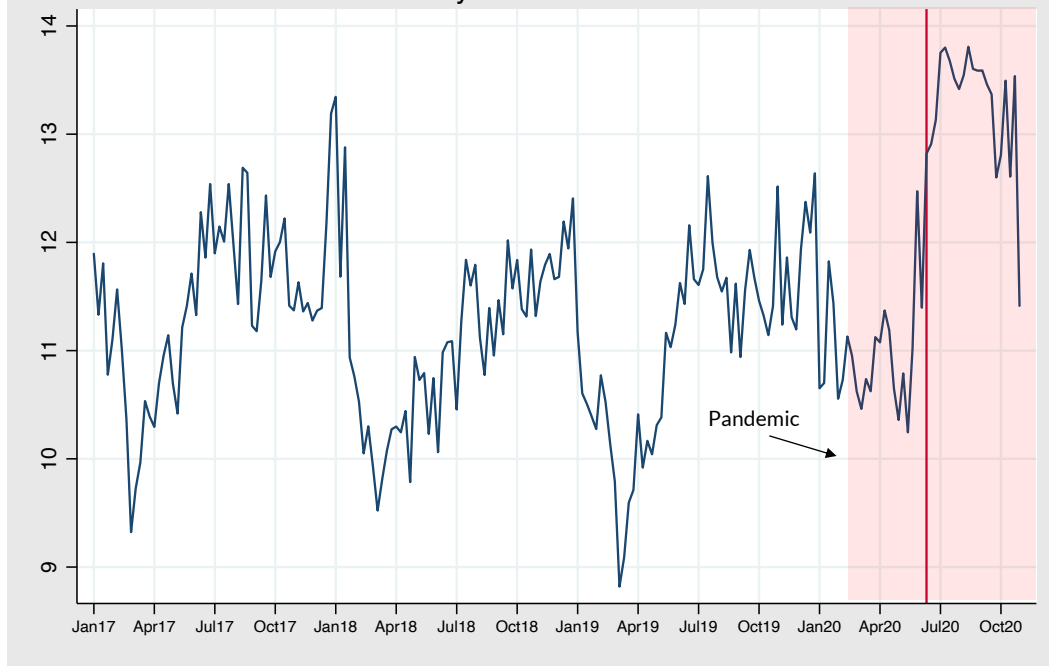
KEY TAKEAWAY

Larceny was 24% lower during the pandemic than the year before.

MOTOR VEHICLE THEFT

Weekly motor vehicle theft rates rose and fell cyclically with no evident linear trend from January 2017 to the structural break in mid-June of 2020 in the 25 cities with available data. Motor vehicle thefts rose to a peak rate about a month later and then fell during late summer. The notable drop at the end of October 2020 should be viewed with caution. Overall, between June and October 2020, the motor vehicle theft rate increased by 14.6% over the same five-month period the year before.

Figure 10. Weekly Motor Vehicle Thefts per 100,000 City Population
January 2017 - October 2020



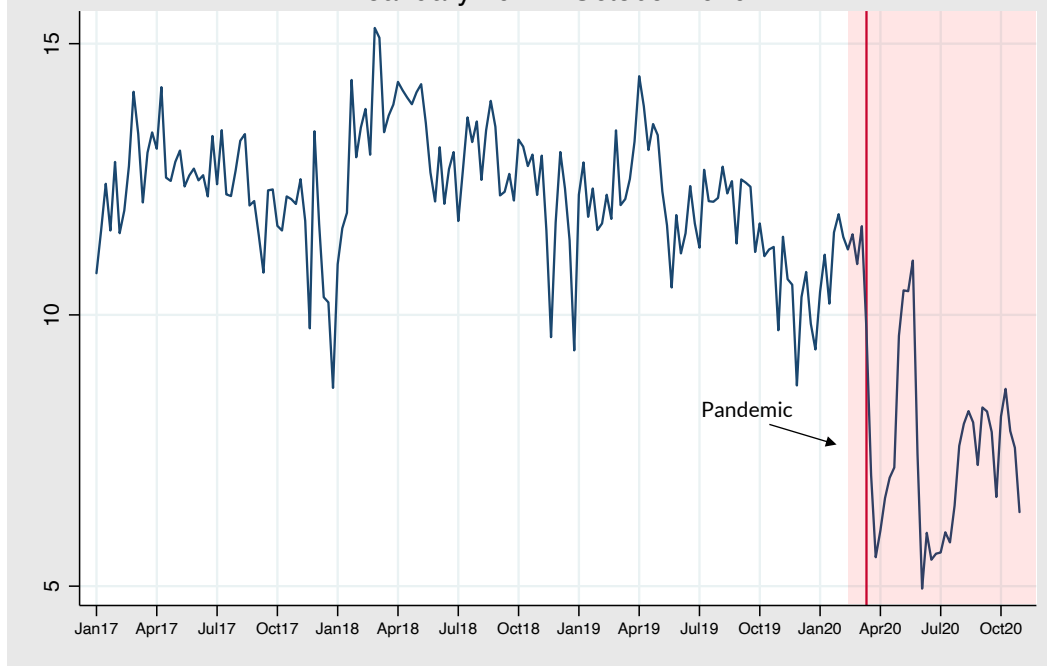
KEY TAKEAWAY

Motor vehicle theft was 15% higher in the summer and early fall of 2020 than during the same period the year before.

DRUG OFFENSES

Drug offenses include arrests for the manufacture, sale, or possession of illicit drugs. The weekly drug offense rate exhibited a downward cyclical trend until the structural break in March of 2020, when the rate fell sharply and then fluctuated during the next several months. Overall, the drug offense rate between March and October 2020 decreased by 32.4% over the same period in 2019, dropping to a level far lower than at any time during the previous three and-a-half years.

Figure 11. Weekly Drug Offenses per 100,000 City Population
January 2017 - October 2020



KEY TAKEAWAY

Drug offenses were 32% lower during the pandemic than the year before.

Conclusion

This study updates our previous reports for the National Commission on COVID-19 and Criminal Justice on crime changes during the pandemic and the social unrest over police violence in the U.S. The current study reveals statistically significant changes in the rates of property, drug, and violent offenses for a sample of U.S. cities during the first eight months of the pandemic. Residential burglaries and larcenies fell while motor vehicle thefts and violent crimes increased during this period. Nonresidential burglary spiked during a single week in early June.

The timing of the declines in residential burglaries, larcenies, and drug offenses coincided with the stay-at-home mandates and business closings in response to the pandemic. Quarantines reduced residential burglary. When businesses are closed, there is no shoplifting. Selling drugs on the street is more difficult when there are fewer people on the street, and drug arrests fall when police priorities divert them from drug enforcement

activities. Residential burglaries and larcenies increased somewhat as quarantines were lifted and shops reopened during the summer.

Rates of homicide, aggravated assault, and gun assault increased significantly beginning in late May and early June of 2020, well after the pandemic began. The increases persisted through the summer and fall. Overall, year-to-date homicide rates were up 29% over 2019, and aggravated and gun assault rates were up 10%.

The precipitous rise in homicide and assaults in the late spring of 2020 coincided with the emergence of mass protests after George Floyd was killed by a police officer in Minneapolis, although the connection, if any, between the social unrest and heightened violence remains uncertain.

While domestic violence increased during the spring and summer of 2020, the increase was not significantly greater than during the same period in prior years. This result should be viewed with caution because it is based on just 12 of the 28 cities in our analysis. We plan on updating this report with an additional investigation of crime changes through the end of 2020. By then we may be able to draw stronger conclusions about the factors driving changes in violent crime in large U.S. cities.

As we concluded in our previous reports, city leaders continue to face policy challenges posed by the recent rise in violent crime. Several evidence-based strategies are available to address the increase in violence, but subduing the COVID-19 pandemic also remains a necessary condition for reducing violence. The ability of the police to prevent and investigate crimes is greatly diminished by social distancing requirements. Social distancing also impedes the anti-violence efforts of street outreach workers and other non-police actors by preventing them from engaging directly with those at the highest risk for violence. Effectively countering the pandemic is an urgent priority as COVID-19 cases and deaths have soared to record levels in the very communities where the violence is concentrated.

Finally, policymakers must take police reform seriously. Protesters have called for increasing accountability for police misconduct and shifting functions such as addressing the day-to-day problems of the homeless and responding to drug overdoses to other agencies and personnel better equipped to handle them. It will not be easy to translate protest ideals into workable public policy, but doing so is essential for improving the relationship between the police and the communities they serve and achieving durable reductions in urban violence.

APPENDIX

Table A1. Cities and Crime Types										
	1	2	3	4	5	6	7	8	9	10
Atlanta	X		X		X	X	X	X	X	
Austin	X	X		X	X	X	X	X	X	X
Baltimore	X	X	X		X			X	X	
Boston		X	X		X			X	X	X
Chicago	X	X	X	X	X	X	X	X	X	X
Cincinnati		X	X	X				X	X	
Dallas			X			X	X	X	X	X
Denver	X			X	X	X	X	X	X	X
Detroit	X	X	X	X	X	X				X
Los Angeles	X		X	X	X	X	X		X	
Louisville	X	X		X	X			X	X	X
Memphis	X			X	X	X	X	X	X	X
Milwaukee	X		X		X				X	
Minneapolis					X	X	X	X	X	
Nashville	X	X	X	X				X	X	X
Omaha	X	X		X	X			X	X	
Philadelphia	X	X	X		X	X	X	X		X
Phoenix	X	X			X	X	X	X	X	X
Pittsburgh	X	X	X		X	X	X	X		X
Raleigh	X	X			X	X	X	X	X	X
Riverside	X		X		X	X	X	X	X	X
Sacramento			X		X					X
San Francisco		X	X		X	X	X	X	X	X
Seattle	X	X			X			X	X	X
St. Louis	X	X	X	X	X	X	X	X	X	X
St. Paul		X	X	X	X	X	X		X	X
St. Petersburg	X	X			X	X	X	X	X	X
Washington	X	X	X		X			X	X	
Total	21	19	18	12	25	17	17	23	25	19

Key

- 1 - Homicide
- 2 - Aggravated Assault
- 3 - Gun Assault
- 4 - Domestic Violence
- 5 - Robbery
- 6 - Residential Burglary
- 7 - Nonresidential Burglary
- 8 - Larceny
- 9 - Motor Vehicle Theft
- 10 - Drug Offenses

Figure A1. Percentage Change in Monthly Homicide, Aggravated Assault, and Gun Assault Rates, 2019 - 2020

