


The Supply and Demand Shifts in Policing at the Start of the Pandemic: A National Multi-Wave Survey of the Impacts of COVID-19 on American Law Enforcement

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Abstract

We report the results of the only multi-wave survey of a large and geographically diverse sample of police agencies across the United States to understand the immediate impacts of the COVID-19 pandemic on law enforcement. Findings indicate an unprecedented and sustained shift in both the supply of and demand for police services during that time. While overall calls for service (demand) tended to decline in most agencies, some experienced increases in specific categories of calls. During the early months of COVID, agencies also reduced their in-person response to calls for service, arrests, proactive policing, and community policing activities (supply). These findings indicate a substantial change in the public safety landscape during that time, which was experienced by agencies of all sizes and from all types of jurisdictions. We explore how public health pandemics can lead to substantial, immediate, and potentially sustained changes to police deployment and police-community interactions that may impact public safety goals.

Keywords

COVID, police, calls for service, proactive policing, community policing

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The year 2020 will historically be remembered as when the highly contagious SARS-CoV-2 virus, commonly known as COVID-19, infected the world. As early as January 17, 2020, the first reported case of COVID-19 in the United States emerged in the state of Washington. By the end of January 2020, the U.S. Secretary of Health and Human Services declared the virus a public health emergency. The number and spread of cases began accelerating at the end of February 2020. On March 11, 2020, COVID-19 was officially declared a pandemic by the World Health Organization. On March 13, then-U.S. President Trump declared a national emergency, and by the end of March 2020, deaths from COVID-19 had begun exponentially increasing. By early April, at least 42 states had implemented stay-at-home orders and social distancing guidance.¹ In over two-and-a-half years in the United States alone, there have been over 97.6 million reported cases of COVID-19 infections and over 1 million deaths.² In 2021 (as in 2020), COVID-19 was the third leading cause of death in the United States, behind heart disease and cancer.³ As a pandemic and public health crisis, COVID-19 has been one of the worst infectious diseases modern humanity has known.

COVID-19 and its related public health emergency declarations led to dramatic changes in everyday life. With reductions and shutdowns in public and private activities, people began sheltering indoors, working and schooling from home, and venturing outside sparingly for supplies. Transportation and tourism came to a standstill with satellite images showing entire highways and cities void of vehicle and pedestrian traffic. Hospitals, nursing homes, and morgues bore the brunt of the immediate impact of COVID, overwhelmed by sickness and death. Throughout 2020, there would be dramatic shifts in employment and commerce, from lost jobs to how people labored. The pandemic and its response further exacerbated pre-existing social inequalities that have been well documented, including racial and ethnic disparities (see the systematic review by [Mude et al., 2021](#)),⁴ gender inequality ([Fisher & Ryan, 2021](#); [Mooi-Reci & Risman, 2021](#)), and relatedly, socio-economic disparities ([Clouston et al., 2021](#); [Fiske et al., 2022](#)). Deteriorating mental health, drug use, alcoholism, and overdoses were additional consequences of these social changes ([Czeisler et al., 2021](#); [Linas et al., 2021](#); [Martellucci et al., 2021](#)).

The significant impact of the pandemic on every aspect of life included unprecedented changes in the criminal justice system (for an overview, see [National Commission on COVID-19 and Criminal Justice, 2020](#)). For example, because of social distancing guidance and the risk of contagion and death, court services attempted to reduce person-to-person contact and postponed hearings and trials,⁵ leading to extensive downstream backlog impacts and changes in court operations ([Baldwin et al., 2020](#); [Chan, 2021](#); [Godfrey et al., 2022](#); [Jurva, 2021](#); [Witte & Berman, 2021](#)). Correctional systems also adjusted, attempting to restrict intake and hasten release to reduce the incarcerated population and alleviate the spread of COVID-19 in confinement ([Carson et al., 2022](#); [Hawks et al., 2020](#); [Marcum, 2020](#)).⁶ Parole and probation supervision and treatment services were also affected, with officers and providers unable to meet with their clients ([Schwalbe & Koetzle, 2021](#); [Viglione et al., 2020](#)).

Some of the most immediate impacts of the pandemic were on police officers and first responders. Unlike schools and other public or private services, law enforcement could not shut down or transition to remote work. Police still needed to respond to public safety concerns and COVID medical emergencies. At the same time, police leaders immediately realized the risk of COVID to their workforces. These concerns were reflected in the immediate mobilization of the large national policing organizations to provide COVID-related information. For example, the Police Executive Research Forum (PERF) began a “daily report” on March 17, 2020, in which readers could see real-time comments by police executives about some of their current challenges and activities.⁷ On March 19, the National Policing Institute (formerly the National Police Foundation) released a briefing for law enforcement in collaboration with the Center for Disease Control (CDC). The International Association of Chiefs of Police (IACP) also began several efforts to monitor the developing situation, consult with expert practitioners, and inform and advise police agencies on emerging issues.⁸ The current study’s surveys were part of that effort.

Given these significant changes that COVID imposed on life and criminal justice, what would be the immediate impacts of the pandemic on law enforcement? To research this question in real-time, the authors and their respective organizations partnered and mobilized quickly once COVID was declared a pandemic in March 2020 to track police agencies’ reactions to COVID. The initial purpose of the surveys was to capture the pandemic’s impact on law enforcement as it was unfolding to provide police agencies with real-time assessments and fact sheets⁹ to inform their practices.

The Impact of Covid-19 on Law Enforcement Agencies

During COVID researchers have conducted empirical surveys assessing police officer perceptions and agency reactions to the pandemic. While these have been on limited samples or occurred after the beginning months of COVID or the murder of George Floyd,¹⁰ they offer several insights. Early studies, for example, focused on the impact of the pandemic on officer perceptions rather than agency operations. [Frenkel et al. \(2021\)](#) surveyed officers from six agencies in five European countries between March and June to understand officer stress, strain, emotional regulation, and preparedness for the pandemic. They found that officers tolerated stress fairly well (conditioned by other factors), although the risk of officers getting COVID and poor agency communication exacerbated officer stress. Between July and September 2020, [Kyprianides et al. \(2021\)](#) surveyed 325 officers in the United Kingdom to ask about their policing experiences during COVID-19. They found that positive organizational support was associated with use of force restraint, procedural justice policing, and better officer health. However, [Kyprianides et al. \(2021\)](#) also discovered that greater officer self-confidence was associated with poorer health and more support for police use of force during the pandemic. Additionally, in March 2021, [Maskály et al. \(2022\)](#) asked 167 officers and non-executives from seven U.S. agencies about operational and organizational changes due to COVID-19. Their results show substantial heterogeneity in how officers viewed

organizational policies about the pandemic, both within the same organization and across different organizations. Overall, officers experienced the pandemic differently, and this experience was likely conditioned by characteristics of their agency and their own health concerns.

At the organizational level, although there have been anecdotal accounts of the impacts of COVID-19 on individual agencies (see, e.g., [Jennings & Perez, 2020](#)),¹¹ systematic surveys across agencies were scarce during the first year of the pandemic. We found only three, and none captured changes at the beginning of the pandemic. For example, informed by our surveys, [Maskály et al. \(2021\)](#) queried police executives using international contacts and received responses from people from 27 countries (they did not report how many individuals responded or from what agencies). The authors noted their survey was sent in “the summer of 2020” (p. 271). As with their officer survey mentioned above, their findings were highly heterogeneous, indicating that changes in organizational operations varied across responses. However, they found some consistent changes, including decreases in in-person training and roll calls, restrictions to public access to police agencies, and increases in remote work. It was unclear from the survey how the worldwide protests for police reform during the time of their survey confounded these findings.

[Mrozla \(2021\)](#), also building off of our surveys, queried approximately 2500 rural agencies in the United States (serving populations of 10,000 or less) between May and September 2020, focusing on how rural police agencies responded to the pandemic. Using email addresses obtained from agency websites, they received responses from 312 rural agencies. Mrozla found that agency size may be positively correlated with having policies related to pandemics. They also noted the specific challenges of personal protection equipment (PPE) provisions for rural agencies, officer shortages, and the need for risk management and preparation for these agencies. Mrozla importantly finds that contrary to some beliefs, rural agencies may not be immune to pandemics and should also prepare for them.

A third survey was reported in *Security Magazine* by [Ekici and Alexander \(2021\)](#). They surveyed agencies post-Floyd starting in June 2020 in Illinois, Missouri, and Ohio (they did not report their survey methodology). They received responses from 73 agencies in Illinois, 30 in Missouri, and 97 in Ohio. [Ekici and Alexander \(2021\)](#) noted significant reductions in these agencies in enforcement, arrest, traffic and pedestrian stops, police training (including academy shut-downs), and community access to police officers.

We believe that our surveys remain the only effort to document—in real time—the immediate (March-May 2020) impacts of COVID-19 at the start of the pandemic and before Floyd’s death, for a large and diverse sample of law enforcement agencies across the U.S. Capturing the immediate impacts of COVID-19 on a wide range of agencies, especially during the first two months of the pandemic, most accurately showcases the initial challenges that U.S. law enforcement agencies face in a rapidly evolving public health crisis with regard to their daily public safety deployment. This understanding is crucial to better planning, preparedness, and response in the future.

Survey Implementation and Data Collection

The challenges of surveying a representative sample of the over 18,000 U.S. law enforcement agencies have been well-documented in the national policing survey research (see, e.g., challenges of the Bureau of Justice Statistics' Law Enforcement Management and Administrative Statistics (LEMAS) survey).¹² Further, surveying agencies quickly and during a crisis certainly dims prospects of success. Thus, at the start of the pandemic in March 2020, the first author partnered with the International Association of Chiefs of Police (IACP) leadership to create and implement the surveys. The IACP is the world's largest professional organization for police leaders, whose tens of thousands of members from around the world include over 6400 chief executives from approximately 5800 agencies in the United States and Canada (with the vast majority from the U.S.). In addition, the chief executive members of IACP are from a wide array of urban, suburban, and rural agencies dispersed across the United States. Using the IACP membership agencies was, therefore, the quickest way to obtain the most immediate estimate of the initial impact of COVID-19 on a large sample of diverse law enforcement agencies in North America.

The IACP agreed to implement two waves of surveys, one from March 25 – April 3, 2020, and the second from May 12 – 25, 2020. The surveys were officially sent by IACP to all of its U.S. and Canadian chief executives by email, and a Qualtrics link was provided for agencies to fill out the survey online. Two additional reminders were sent within the period each survey was open. As more than one individual who received the survey request might have served in an executive leadership role in the same agency, recipients were given explicit instructions that only one survey was to be filled out for each agency by the chief executive with direct knowledge of operational adjustments due to COVID-19. Recipients were also frequently reminded across each survey of the "as of" date for questions, which was two days before each survey's release. Specifically, for Wave 1 (released on March 25, 2020), respondents were asked to provide answers "as of March 23, 2020." For Wave 2 (released on May 12, 2020), respondents were asked to respond with answers "as of May 10, 2020." To ensure that the murder of George Floyd and subsequent protests did not impact agency responses, we did not include any surveys received on or after May 25, 2020, the last day of the second survey implementation. Only two responses were removed because of this reason.

As the survey was implemented at the start of the pandemic, it was difficult to determine precisely the relevant questions to ask. Because of this, the March and May surveys were not identical, although many questions were similar. For example, in the first survey, we focused on changes to agency operations, agency preparedness, changes to the civilian workforce, and the impacts of stay-at-home orders. In the second wave, we continued to ask about these changes but also inquired about trends of specific categories of calls for service and budgetary concerns.¹³

For the first wave, 989 agency representatives completed and returned surveys after two reminders (reflecting a 17% agency-level response rate). For this analysis, we removed the 11 Canadian agency responses given the different country context of those

surveys (although they were included in the initial fact sheets distributed to the agencies). For the second wave, 1141 surveys were completed and returned after two reminders (reflecting a 20% agency-level response rate). Ten of these were from Canadian agencies, which, again, were removed for this analysis. While checks across the data (I.P. addresses, location, state, number of officers in the agency) did not indicate multiple responses from potentially the same agency, the anonymous and voluntary nature of the survey made this impossible for us to determine with 100% certainty (for example, in both Wave 1 and 2 surveys, approximately 7% of respondents did not provide the state where their agency was located). However, given our checks, we believe the responses represent unique and individual law enforcement agencies in the United States but note this possible source of error. We also do not know if the same agencies answered both surveys and can only estimate impacts based on a cross-section of the two samples taken from the same population.

Table 1 shows the proportion of agency responses across various characteristics, including the number of sworn officers, civilian personnel, population served, and U.S. region. Approximately three-quarters of agencies in the United States have fewer than 25 sworn officers, and only 5% have over 100 officers (Hyland & Davis, 2019). Thus, agencies with 100 or more officers are overrepresented in both waves of this survey. Nonetheless, we captured a substantial proportion of agencies with 25 officers or less (41% in Wave 1; 32% in Wave 2). Additionally, at least half of the agencies participating in each survey serve populations of 25,000 or less, showing that we captured a large sample of (likely) rural agencies. In the second survey, a larger proportion of agencies with more than 50 officers serving places with a population of more than 25,000 answered the survey compared to smaller agencies with smaller populations. Participating agencies represented every state and Bureau of Economic Analysis region of the United States.

Immediate Impacts of Covid-19 on U.S. Police Agencies

Given space limitations, we do not present all of the findings from both surveys here. However, we present several main results, focusing on how the pandemic significantly changed the *demand* and *supply* for police services. By “demand,” we mean the public’s expectation of safety and police legitimacy, often manifested through the public’s calls for police service but also from other community requests to the police. By “supply,” we mean the resources and activities the police use to meet that demand for public safety. These can include police response to calls for service, enforcement activities, proactivity, and community engagement.

Changes in Requests for Police Service

It would be near impossible to obtain and analyze calls for service data across the thousand agencies in our samples to understand their calls for service trends. So instead, we asked agencies if they had experienced changes in their overall volume of calls for

Table I. U.S. Agencies that Responded to Each Survey.

	Wave 1 (n = 978)	Wave 2 (n = 1131)
Sworn officers		
Less than 25	41.3%	32.1%
25-49	24.1%	23.5%
50-99	14.6%	18.1%
100-499	11.3%	14.9%
500-1000	1.4%	2.9%
1000 or more	1.1%	3.4%
Missing responses	6.0%	5.0%
Civilian employees		
Less than 10	56.0%	46.9%
10-19	14.3%	16.9%
20-29	7.9%	9.0%
30-49	5.3%	7.3%
50-99	4.8%	6.4%
100 or more	5.1%	8.6%
Missing responses	6.3%	5.0%
Population served		
Less than 25,000	60.1%	50.9%
25,000 - 49,999	14.6%	17.0%
50,000 - 99,999	8.9%	11.6%
100,000 - 249,999	5.1%	6.5%
250,000 - 499,999	1.4%	2.2%
500,000 - 999,999	1.2%	2.7%
1 million or more	2.5%	4.0%
Missing responses	6.1%	5.2%
Bureau of economic analysis regions ^a based on state provided		
Great lakes	20.2%	17.6%
Mideast	18.5%	17.4%
Southeast	14.9%	16.1%
New england	10.8%	10.7%
Southwest	8.7%	8.0%
Far west	8.0%	10.5%
Plains	7.7%	7.9%
Rocky mountain	3.8%	4.9%
Missing responses	7.4%	6.9%

^aSee <https://apps.bea.gov/regional/docs/msalist.cfm?mlist=2>.

service received (demand). At the end of March, during the first survey, 57% percent of responding agencies reported experiencing significant declines (10–50%) in their calls for service, with an additional 14% of respondents noting that calls dramatically decreased by more than 50%. We then asked a more specific question in our second survey, requesting that agencies estimate increases or decreases (5–20%, greater than 20%) or no change for different call types, comparing their calls for service volumes during the previous month of April 2020 with those in April 2019. [Table 2](#) shows the specific breakdown of the estimates provided in the second survey. Cell proportions are bolded when a quarter or more of responding agencies reported increases, no change, or decreases.

As [Table 2](#) indicates, by May 2020, over three-quarters of responding agencies had experienced reductions in demands for their services from community members, with one-third of respondents reporting that this decrease was substantial (more than 20%). Regarding specific categories of calls for service asked in the second survey, agencies were most likely to see decreases (when comparing April 2019 with April 2020) in traffic crashes and fatalities, and for some, violent crimes and commercial burglaries (although a significant minority of agencies reported stable trends in these crime types). Some agencies experienced increases in specific categories, most notably domestic violence and mental health calls, which we will return to shortly. The overall relationships between the reported trends experienced between each category of calls were positive and significant, as shown in [Table 3](#), which reports Kendall's tau-b for each of these relationships. Generally, when an agency experienced a decline in overall calls for service, this decline was often felt across nearly all types of calls. No significant relationships between the experienced trends of all calls or specific categories of calls and population size or number of sworn officers were found,¹⁴ indicating that the decline in overall requests for police services was a shared experience across various sizes of police agencies and populations.

There are some interesting caveats to these findings. As [Table 2](#) shows, 43% of responding agencies experienced *increases* in domestic incidents, and 47% of responding agencies experienced *increases* in calls related to people in mental distress. [Table 3](#) also indicates a stronger relationship between agencies reporting increases in domestic-related calls for service and mental distress calls. Similarly, stronger relationships were found between those reporting increases in violence and commercial burglaries. Several ordered logistic regression models run separately for each call category against all other call categories, population size, and the number of sworn officers confirmed these results and continued to confirm that jurisdiction or agency size was not a factor in these trends. In total, these findings suggest that while the overall demand for public safety declined in the first two months of COVID, some agencies did experience increases in certain categories (and groupings of categories) of calls.

Table 2. Percent of Responding U.S. Agencies in Wave 2 ($N = 1131$) Experiencing an Increase or Decrease in Certain Types of Events in April 2020 Compared to April 2019.

	Increase >20%	Increase 5–20%	Stayed About Same, %	Decrease 5–20%	Decrease >20%
Overall calls for service	1.8%	6.3%	15.6%	41.9%	33.9%
Domestic incidents (violent and non-violent)	8.5%	34.3%	37.5%	12.5%	7.1%
Violent crimes, generally	2.7%	10.5%	40.7%	28.7%	16.5%
Commercial burglaries	3.5%	11.8%	45.3%	23.7%	14.4%
Traffic crashes and fatalities	1.1%	5.0%	24.9%	38.3%	29.6%
Calls related to mental distress	9.3%	37.6%	40.6%	8.0%	3.8%

Less than 1% of responses were missing for each type of call for service.

Changes to Agencies' Response to Calls for Service

Not only did the overall volume of calls for police service decline at the start of the pandemic, but police agencies also decided—often by policy—to reduce their in-person response (supply) to some calls for service. As [Table 4](#) shows, a substantial proportion of agencies in the first and second surveys (43% and 45%, respectively) reported that they were no longer responding in person to more than 20% of calls for service that they would have normally responded to in person before the pandemic.¹⁵ In addition, by March 23, 91% of agency respondents had already provided their patrol officers with formal criteria and guidance as to when officers were required (or not) to respond to calls for service in person. This increased to 95% in Wave 2. Combined with the reduction in calls for service, this reflects a substantial (and historic) decline in day-to-day interactions that police officers had with people during the early stages of the pandemic and a remarkable shift in how police officers typically respond to dispatched calls for service. While there have been times when agencies have chosen not to respond temporarily to certain calls for service in person (e.g., during the terrorist attacks of September 11, 2001, or during natural disasters), this policy decision across multiple agencies in the U.S., sustained for at least the three months measured by this survey, is unique in modern law enforcement history.

Perhaps this decision to respond remotely to calls was correlated with challenges faced with provisions of personal protective equipment, officers infected with COVID, or other agency characteristics. We regressed several factors on this decision to reduce the supply of in-person response, including population size, number of sworn officers, trends in calls for service, availability of personal protective equipment (discussed later), the proportion of the sworn workforce with COVID (measured only in the second survey), and even the proportion of the civilian workforce working remotely. None of these models were well fitting and violated several assumptions. However, ordinal by ordinal crosstabulations revealed only a modest but statistically significant

Table 3. Relationships between Trends Experienced for each Calls for Service Category Compared to all other Calls for Service Category (Kendall’s tau-b Displayed for Ordinal by Ordinal Relationships).

	Overall Calls	Domestic related	Violence	Comm. burglary	Traffic crashes	Mental distress
Overall calls	1.000	0.230	0.339	0.285	0.317	0.131
Domestic related		1.000	0.307	0.240	0.140	0.405
Violence			1.000	0.464	0.281	0.200
Comm. Burglary				1.000	0.232	0.172
Traffic crashes					1.000	0.115
Mental distress						1.000

All tau-b statistics shown have approximate significance of $p < .01$.

relationship ($p < .001$) between this decision and the number of sworn officers and population size (Kendall’s tau-c = -0.096 and -0.106 , respectively). Generally, agencies with fewer than 100 officers or jurisdictions with populations of 100,000 or fewer tended to be more likely to reduce their in-person responses to calls for service. However, given the lack of clear findings in the regression models, we caution readers about the robustness of this finding.

Reductions in Officers’ Use of Arrest

Agencies substantially reduced their use of arrests and enforcement at the beginning of COVID (another reduction in the supply of policing), especially for minor offenses. The reduction in the use of arrest was likely not only the result of a decline in certain types of offenses, but also a policy decision made by several agencies to prevent officers from contracting COVID and because of decisions made by other parts of the justice system. For example, 65% of responding agencies noted that by March 23, 2020, their jail or correctional facilities that receive and process arrestees had already restricted the types of arrestees they would intake (e.g., not receiving misdemeanants or those who appeared sick). This proportion increased to 72.4% by May 10. By March 23, 77% of responding law enforcement agencies had already provided their officers with formal instructions to reduce their use of physical arrests for minor offenses (and similarly, 73% by the second survey). Regression analysis shown in Table 5 confirmed these findings when controlling for the number of sworn officers, jurisdiction population, the proportion of sworn officers sick with COVID, or trends in calls for service. Agencies in jurisdictions that restricted jail intake were 2.4 times more likely to restrict arrests for minor offenses. Additionally, agencies that restricted proactive enforcement

Table 4. Estimated Proportion of Calls that Officers were no Longer Handling in Person in the first 2 months of the Pandemic.

	Wave 1 ("as of Mar 23")	Wave 2 ("as of May 10")
10% or less	27.0%	29.2%
11%–20%	20.1%	25.5%
21%–30%	14.7%	22.3%
More than 30%	28.2%	22.2%
Did not answer	9.9%	0.8%

activity (see discussion below) were also five times more likely to restrict arrests for minor offenses.

Changes in Officer-Initiated Proactive and Community-Oriented Activity

In addition to responding to calls for service and making arrests, police officers commonly engage in proactive or self-initiated activities to prevent and deter crime, disorder, and traffic crashes, or to improve police-community relationships. Lum et al. (2020) have found that most of this supply-side proactivity consists of traffic (and sometimes pedestrian) stops and generalized patrol. Thus, we asked agencies whether they had adopted a formal policy or directive to limit officers' self-initiated proactive enforcement behaviors (e.g., traffic and pedestrian stops) and also community engagement activities due to COVID.

By March 23, 62% of responding agencies had already adopted formal policies asking officers to reduce or limit proactive enforcement behaviors, which, as Table 5 indicated, was strongly associated with a reduction in the use of arrest for minor offenses. However, by May 10, this proportion declined to 54%, indicating that a small group of agencies may have resumed proactive enforcement efforts (or at least did not formally restrict them). Larger agencies (those with 500 or more sworn officers) were somewhat less likely¹⁶ to formally ask officers to reduce their proactive enforcement activities (although these agencies make up the smallest number of responses). (Interestingly, a recent study by Nielson et al. (2022) found that self-initiated proactivity for patrol *increased* after COVID began in Houston, Texas).

Figure 1 shows that this decline of agencies restricting proactive enforcement between March and May occurred in every agency size level, except for agencies with 500 or more officers (who made up the smallest number of responses, as shown in Table 1). We can only speculate about reasons for the decline in the proportion of agencies restricting proactive enforcement between March and May. Many jurisdictions still maintained stay-at-home orders, although some public activity was resumed by May. In addition, we now know from reports by the National Highway Transportation Safety Administration (Stewart, 2022) that traffic fatalities *increased* from 2019 to 2020, particularly speeding-related, alcohol-impaired, and seat-belt non-use fatalities.

Table 5. Logistic Regression Analysis of Predictors of Agency Restricting Arrest Activities.

	B	S.E.	Wald	df	Sig.	Exp (B)
Population (reference = under 25,000)						
25,000-49,999	-0.223	0.294	0.574	1	0.449	0.800
50,000-99,999	-0.455	0.409	1.237	1	0.266	0.634
100,000-249,999	-0.268	0.519	0.267	1	0.606	0.765
250,000-499,999	-0.147	0.660	0.049	1	0.824	0.864
500,000-999,999	-0.209	0.688	0.092	1	0.761	0.812
1 million or more	-0.216	0.599	0.130	1	0.718	0.806
Number of sworn officers (reference = less than 25)						
25-49	0.081	0.228	0.127	1	0.721	1.085
50-99	0.382	0.345	1.225	1	0.268	1.465
100-499	0.213	0.466	0.208	1	0.648	1.237
500 or more	-0.389	0.605	0.413	1	0.520	0.678
Proportion of sworn on sick leave due to covid (reference = none or less than 1%)						
1-5%	-0.156	0.182	0.734	1	0.392	0.855
6-10%	-0.041	0.340	0.014	1	0.905	0.960
More than 10%	-0.020	0.500	0.002	1	0.968	0.980
Overall calls for service (reference = decrease)						
Stayed the same	-0.032	0.222	0.021	1	0.884	0.968
Increased	-0.092	0.299	0.095	1	0.757	0.912
Policy to limit proactive enforcement [no = 0; yes = 1]	1.814*	0.167	117.506	1	0.000	6.135
Jail restricted intake [no = 0; yes = 1]	1.228*	0.167	53.818	1	0.000	3.415
Constant	-0.504	0.203	6.156	1	0.013	0.604

Nagelkerke $R^2 = .283$, Cox and Snell $R^2 = .193$, -2 Log Likelihood = 990.208, no. of observations = 1,060, Chi-Square = 227.592 ($p < .001$). * indicates statistical significance ($p < .001$).

Agencies may have realized this problem early on and adjusted their initial reduction in proactive traffic enforcement, given increases in reckless driving behaviors during the first two months of the pandemic.

We also asked agencies whether they had adopted a formal policy or directive to limit community-oriented policing activities of officers (for example, community meetings, problem-solving activities, etc.) due to COVID. It appears that U.S. police agencies were even more likely to restrict community-oriented activities than proactive enforcement activities. By March 23, 2020, 73% of agencies responded that they had officially and formally reduced or limited community-oriented policing activities. By May 10, this proportion had declined to 64%, but it remained higher than proactive enforcement activities across all sizes of agencies, as shown in [Figure 2](#). While smaller agencies were less likely to restrict community policing activities than their larger counterparts, the proportion of agencies restricting community engagement was still substantial.¹⁷

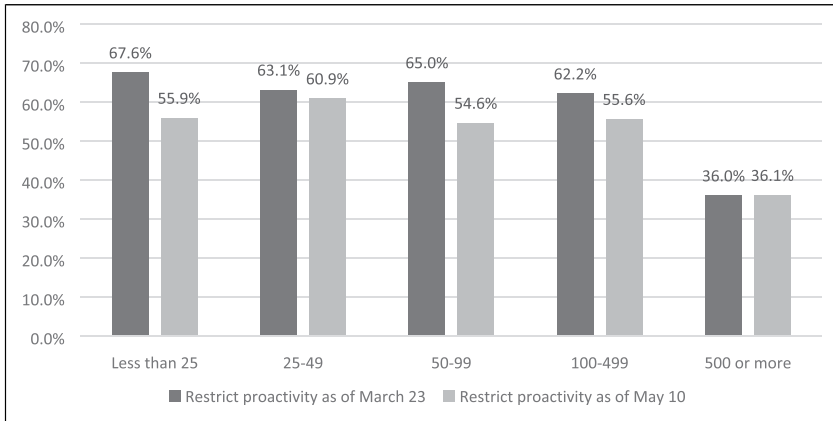


Figure 1. Percentage of Responding Agencies (Categorized by Number of Sworn Officers) Who had Formal Policies to Restrict Proactive Enforcement for Each Survey Wave by Size of Agency.

Other forms of community engagement were also low during the first two months of the pandemic. For example, by May 10, 2020, only 19% of responding agencies had led an official press conference addressing law enforcement activities related to COVID-19. More generally, 66% of responding agencies had responded that they had not significantly changed their use of social media to communicate with the public (although 27% did report increasing their use of social media because of COVID). Again, these trends were not correlated to jurisdiction or population sizes.

Protecting Officers from Contracting COVID

Initial efforts to restrict in-person contact and other supply-side policing efforts at the beginning of the pandemic were likely due to agencies being concerned about their workforce contracting COVID-19. Even by the first survey, 43% of agency heads responded that all of their officers had already received formal guidance and information from either the CDC or their state and local health agencies about the infectious nature of COVID-19. This proportion had increased to 83% by May 10. Given this, how prepared were U.S. law enforcement agencies in protecting their workforce from contracting COVID, and how might this have impacted their activities?

The provision of personal protection equipment (PPE) for front-line officers and emergency responders had been a significant concern at the start of the pandemic, with immediate supply shortages reported by the media. Police agencies often have PPE supplies in stock, but the exponential increase in the need for these supplies due to COVID placed incredible pressure on some agencies for large amounts of these supplies. However, as already mentioned, the provision of PPE was also not found to be related to the reduction in the supply of police services. In March, 90% of agencies

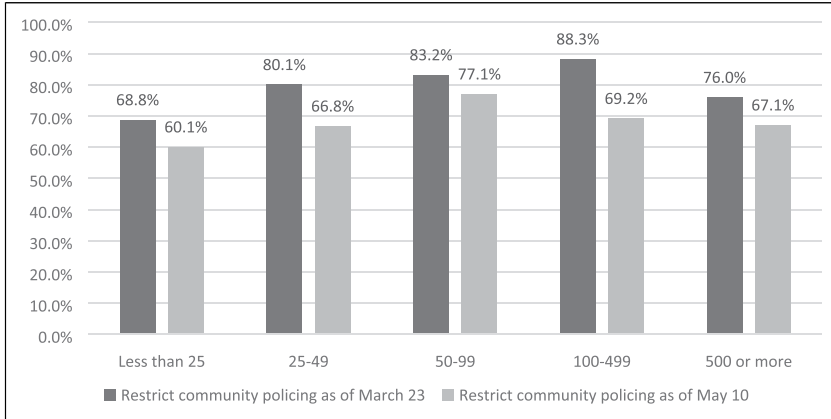


Figure 2. Percentage of Responding Agencies (Categorized by Number of Sworn Officers) Who had Formal Policies to Restrict Community Policing Activities for Each Survey Wave by Size of Agency.

responding to the survey said that officers had PPE that they could use (primarily face masks and gloves) in their possession. At the same time, 15% of agency respondents rated their ability to provide PPE to their officers as “excellent”; 38% as “good”; 28% as “fair”; 13% of agencies indicated this ability to be “poor” or “very poor.” At that time, about 57% of responding agencies had tasked their first-line supervisors with regularly inspecting, monitoring, and supervising PPE use, and 53% of agencies were “confident” in maintaining these supplies.

By the second survey wave (as of May 10), a better picture of the availability of PPE emerged (and we also asked more specific questions). Seventy-six percent of responding agencies stated that they had enough PPE to sustain employees for at least 30 days (an additional 17% had enough PPE for at least the next two weeks). Only 5% of agencies did not have enough PPE to last one more week or did not have any PPE. The majority of agencies by the second survey received their PPE supplies locally or from internal supplies (62%), while another 13% received them through donations or private companies/individuals. Only 2% of agencies by May 2020 were relying on the federal government to provide them with PPE. By May, almost three-quarters of agencies had supervisors regularly inspecting PPE and had confidence that they could sustain PPE supplies. Compared to March, agencies in May were more confident about managing officers exposed to COVID-19. On a scale of 1 to 5, with 1 being “very poor” and 5 being “excellent,” agencies had rated themselves 3.7 in Wave 1, but by Wave 2 this average rating increased to 4.2. Overall, it seems that within the first few months of the pandemic, police agencies had quickly adapted to manage the provision and inspection of PPE and the risk of COVID infections among their staff.

It is unclear from our survey how successful agencies were in the first two months of keeping their officers from contracting COVID based on the availability of PPE and

their efforts to reduce in-person contact with the public. Recent reports from the [National Law Enforcement Memorial and Museum \(2022\)](#) indicate that COVID-19 deaths were the leading cause of officer fatalities in 2020 and 2021. The Officer Down Memorial Page (ODMP)¹⁸ reports its earliest COVID-19 related line-of-duty death was on March 24, 2020. Between our March and May surveys, 27% of the *total* deaths reported by ODMP in 2020 (a total of 274) were COVID-related. We only asked about sick leave in Wave 2, and the findings are hard to interpret, as contracting COVID on duty may not have been dealt with through normal sick-leave processes. For example, approximately 60% of agencies did *not* report noticeable officer sick leave due to COVID, although 28% reported 1–5% of sworn officers out on sick leave due to COVID-19 infections or quarantining. However, 38% of agencies also reported 1–5% of sworn officers out on sick leave for other reasons, not due to COVID.

The Changing Supply and Demand of Policing: Are we at a New Equilibrium Point?

In this study, we report on the findings of the only systematic agency surveys conducted across a large and diverse sample of U.S. law enforcement agencies during the first two months of the COVID-19 pandemic and before the murder of George Floyd. The ability to carry out these two national surveys as the pandemic broke speaks to the partnerships that can be established between researchers and practitioners for a common goal. Given that the surveys were implemented before George Floyd's murder, they are also the only agency-level surveys with responses that are not confounded by that event and its aftermath. As with other national policing surveys, our surveys somewhat oversample larger agencies (although a substantial proportion of the sample are small agencies) and are samples of convenience (using the IACP membership list). Additionally, given the limitations detailed in our methods section, we could not conduct a longitudinal analysis given the cross-sectional data collected. Despite these shortcomings, our surveys show that COVID's impacts on policing were dramatic in the first two months of the pandemic, with some lingering effects. Not only were the impacts of COVID-19 on police agency operations substantial, but these impacts were shared across agencies large, small, urban, suburban, and rural.

The surveys reveal that COVID-19 significantly altered both the supply and demand for police services in the first three months of the pandemic. Concerning demand, we find the overall volume of calls for service initially declined, confirming what others have generally found (see, e.g., [Abrams, 2021](#); [Ashby, 2020](#); [Campedelli et al., 2020](#); [Langton et al., 2021](#); [Lopez & Rosenfeld, 2021](#); [Piquero et al., 2021](#)). The halting of public life dramatically altered the opportunities, routines, situations, and interpersonal exchanges associated with crime, disorder, conflicts, and traffic accidents. These changes naturally impacted the volume, frequency, and types of calls for emergency services through 911 and other non-emergency public safety numbers. At the same time, studies have revealed that the short and long-term effects of COVID-19 on specific types of calls for service and crime are complex. Certain requests, such as those

for traffic issues or minor disorders, decreased early in the pandemic, likely due to changing routines and the ceasing of public life. Some declines in calls for service may have also occurred due to a decline in official reporting but may not reflect actual trends, such as domestic violence (Nix & Richards, 2021; Piquero et al., 2021) or child abuse (U.S. Department of Health & Human Services, 2022). In our surveys, agencies that reported increases in calls related to domestic violence also often reported increases in calls for mental distress. Others have found that firearms and other violence have increased in some cities and at certain times (Beard et al., 2021; Kim & Phillips, 2021; Lopez & Rosenfeld, 2021). Our survey indicated that agencies that experienced increased violence initially in the pandemic may have also experienced increased commercial burglaries.

The overall decline and heterogeneity of trends across call categories suggest that public safety demands may have transformed significantly and quickly, reflecting a new portfolio of community public safety needs for the police. Typical patterns of resource allocation and prioritization that police had been accustomed to changed almost overnight. Critical questions for researchers to explore about these shifts are whether and why certain calls went up or down and whether law enforcement agencies were prepared for these shifts. For example, were agencies prepared to handle the changing needs and shifts in tactics required to respond to (and prevent) increases in specific types of events? When agencies did shift to remote response for certain calls, were they for call types that increased or decreased? What were the consequences of those adjustments for public safety?

At the same time as changing demands, the police adopted policies to modify the supply of police services, likely to protect their officers from contracting COVID and anticipating staffing shortages. A significant majority of the responding agencies from both surveys restricted officers from responding to certain calls for service in person, reduced arrest and proactive enforcement, and stopped community engagement activities. Some of these adjustments may have continued longer than expected. As previously mentioned, Maskály et al. (2021) found similar results in a smaller international sample of agencies during the summer of 2020. Ekici and Alexander (2021) noted these same trends again in the fall of 2020. Our survey also indicated that these reductions in supply were not met by a substantial increase in other forms of communication with the public. If thinking of this as a supply and demand relationship (see Figure 3), the shift in both the supply (S_1 to S_2) and demand (D_1 to D_2) for police services may have significantly moved the point of equilibrium (E_1 to E_2) of police-community interactions. The magnitude and impact of this change depend not only on the elasticity (or slope) of each curve but also the extent of the shifts of both.

Police leaders, communities, and researchers should be concerned about the short- and long-term impacts of this equilibrium shift on police legitimacy and public safety. Without tracking these adjustments carefully, agencies may adopt remote response or reduce some enforcement blindly, potentially with negative consequences. For example, when the police move to remote response to some calls for service, can they

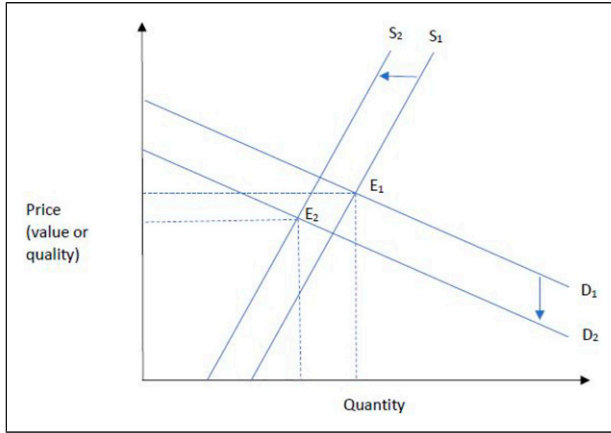


Figure 3. Shifting Supply and Demand of Policing during the First Few Months of the COVID-19 Pandemic.

address community requests as effectively and efficiently, and what are the benefits and costs of doing so? Unfortunately, we do not have rigorous research comparing face-to-face versus virtual call responses on various outcomes (e.g., customer service, resolution of the problem, apprehension of the suspect, prevention of the problem in the future, the legitimacy of the system). Therefore, we do not know if this patrol deployment approach is beneficial for the individual who calls the police or for public safety more generally. Additionally, *which* calls are being handled remotely? For some categories of calls, remote response may have little impact on victim services or public safety. But for other categories of calls, remote response may not help to calm victim fears, resolve particular disputes, or adequately relay information to callers or deterrence and prevention signaling to offenders.

And what about the increased demand for police services for specific types of incidents? While family violence and child abuse were always serious public concerns before COVID, our surveys, combined with the studies from [Piquero et al.'s \(2021\)](#) systematic review, show that having people stay at home for extended periods may have increased these problems in our society. Getting people back out of their homes will not undo the abuse that may have already occurred during the stay-at-home periods. Formal and informal mechanisms for reporting family violence also shifted during COVID ([Richards et al., 2021](#)). For example, school policies and laws have long facilitated child abuse reporting by third parties (e.g., teachers and counselors), but virtual education altered this dynamic. The adjustment to virtual schooling may have caused an artificial decline in demand (requests for service) in some jurisdictions when needs may have actually increased. Delays in court and detention processes may have further exacerbated these changes during the early months of the pandemic, which may worsen

domestic violence cases and situations. Some jurisdictions also noticed increases in certain types of violence (Lopez and Rosenfeld 2021). These specific findings indicate that pandemics may present police leaders with more complicated concerns than just whether certain crimes increase or decrease. The causes and landscape of offenses and public safety problems may transform in ways that require dynamic adjustments to the quality of police deployment, not simply the quantity. Agencies can prepare by developing better tracking and analytic mechanisms for understanding not only the frequency but also the nature of public safety demands, so they can see shifts in the landscape of those demands more clearly to make more strategic adjustments to their supply of policing.

We also note that agencies may be slower to return to proactivity and community engagement, even though demand (or crime) may return to previous levels relatively quickly. We know from a large body of research that when done well, proactive and community-oriented policing can reduce crime, disorder, and accidents, and improve community satisfaction and legitimacy towards the police (see assessments by NAS, 2018; National Research Council [NRC], 2004). At the same time, we also know that these types of deployments and reforms have been slow to penetrate the vice-like grip that traditional, reactive, and arrest-oriented approaches have on U.S. policing (Lum & Koper, 2017). Several gains were made in the 21st century in improving agency approaches to align with this evidence-base. However, the pandemic reduced these activities significantly and quickly. Subsequent protests of the police after Floyd's murder and calls to defund or divert police responsibilities to others may have continued to slow the return of these activities. However, once public routines (and calls for service) bounce back (which they did later in 2020), such proactive police activities might be important to preventing and deterring crimes and traffic accidents. More specifically, certain crimes that increased during the first year of the pandemic may be particularly elastic to the supply of police services, and therefore depend on police enforcement to control.

Returning to Figure 3, we also do not know the long-term effects of the change in the police-community equilibrium point on police legitimacy. Many agencies continue to deploy alternatives to in-person call response to this day and for several reasons unrelated to the fear of officers contracting COVID (resource-saving, officer preference, or as a response to calls for defunding or diversion, to name a few). Several agencies have still not resumed pre-pandemic levels of community-oriented activities in person. Over the long term, what impacts will these shifts have on police legitimacy and police-community relationships? Again, we only speculate, and the direction of effects is uncertain. Maybe those service calls now being handled remotely or pre-COVID community engagement activities had little connectivity with police legitimacy and police-community relationships, which may depend more on visible police activities, sentinel events, police use of force, or how the agency responds to serious crimes. On the other hand, previous research has indicated that community members are often concerned about minor issues in their neighborhoods. These calls for service of more minor issues may also serve as opportunities for problem-solving or

community engagement to build collective efficacy. Reducing police response to seemingly minor community issues may have bigger impacts than some might expect, a hypothesis raised by Mazerolle et al. (2002) in their studies of “311” alternative telephone lines. Gill et al.’s (2014) systematic review also found that while community policing may not necessarily reduce crime, these activities can improve police legitimacy and community satisfaction with the police.

Additionally, Floyd’s murder and the subsequent worldwide protests resulted in several challenges to policing and exposed the fragile relationship between police and communities. However, fundamental changes in police-community relationships were occurring well before Floyd. Although only a hypothesis, the downward shift in the equilibrium of police-community relationships caused by COVID may have accelerated the downward spiral of police-community relationships post-Floyd that agencies were already experiencing pre-pandemic. The reduction in face-to-face response to calls for service during the COVID pandemic may have also inadvertently provided *more* justification for defunding arguments, although such an argument would be complicated (Lum et al., 2021).

It is fair to say that people are tired of discussions about the pandemic and want to move on. Thankfully, mortality rates have slowed, and vaccines and other treatments have been developed to try and mitigate the pandemic’s impacts on our everyday lives. At the same time, it will be important for law enforcement agencies to conduct agency-specific after-action assessments of the short and long-term impacts of COVID on crime and disorder, community sentiment and police legitimacy, and agency operations. In particular, understanding the lingering effects of COVID on both police organizations and their communities, and how to restore police-community interaction equilibrium points if slippage occurred during the pandemic, may be important goals, especially during a period of police crisis and reform.

Author’s Note

The findings and recommendations presented within this report are from the authors and do not necessarily reflect the official positions or opinions of the IACP.

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Notes

1. See <https://www.kff.org/coronavirus-policy-watch/stay-at-home-orders-to-fight-covid19/>. See also <https://www.nytimes.com/interactive/2020/us/states-reopen-map-coronavirus.html>.
2. See <https://covid.cdc.gov/covid-data-tracker/#dataatranker-homeforup-to-dateinformation>.
3. See <https://www.cdc.gov/mmwr/volumes/71/wr/mm7117e1.htm>.
4. See also the CDC's tracking of racial inequalities in COVID infection here: <https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-race-ethnicity.html>.
5. These restrictions are too lengthy to review here. However, there is extensive documentation on restrictions in U.S. federal (<https://www.uscourts.gov/about-federal-courts/court-website-links/court-orders-and-updates-during-covid19-pandemic>) and state and local courts (for one example in Virginia, see https://www.vacourts.gov/news/items/covid_19.pdf).
6. Again, these orders are documented differently across states. To see an example from New York, go to <https://doccs.ny.gov/doccs-covid-19-report>.
7. See <https://www.policeforum.org/covid-19-response#daily>.
8. See <https://www.theiacp.org/resources/document/law-enforcement-information-on-covid-19>. See also International Association of Chiefs of Police and Office of Community Oriented Policing Services. 2022 (forthcoming). COVID-19 Law Enforcement Impact and Response: Collaborative Reform Initiative Technical Assistance Center (CRI-TAC): Washington, DC: Office of Community Oriented Policing Services.
9. Wave 1 Fact Sheet: <https://www.theiacp.org/sites/default/files/IACP-GMU%20Survey.pdf>. Wave 2 Fact Sheet: https://www.theiacp.org/sites/default/files/IACP_Covid_Impact_Wave2.pdf.
10. On May 25, 2020, George Floyd, a 46-year-old Black male was murdered by a white police officer in Minneapolis, Minnesota. The officer killed Floyd by kneeling on Floyd's neck for over 9 minutes, despite the fact that Floyd was handcuffed and lying face-down in the street. The officers involved were charged (and some later convicted) of homicide. Floyd's death was a turning point in policing and led to worldwide protests against police use of force and extensive discussions and proposed legislation on police reform. Cities that experienced protests often went from few people interacting in public to large groups protesting.
11. See also PERF's daily report collection at <https://www.policeforum.org/covid-19-response#agency>.
12. For more information about this data collection, see <https://bjs.ojp.gov/data-collection/law-enforcement-management-and-administrative-statistics-lemas>. The first author has conducted several random-sample agency level surveys using LEMAS information about agencies, which often take months (as they often are best implemented with paper mail surveys), and result in low response rates if multiple telephone followups are not conducted.
13. The survey instruments are available upon request.
14. Both ordinal by ordinal crosstabulations and ordinal regression were run on this data, given that both the number of sworn officers and population size were collected in categories. Unfortunately, given the anonymous nature of these surveys, we only had these two agency

- and jurisdiction characteristics for each respondent. Thus, we did not have the specific jurisdiction name and therefore could not factor into our analysis rate of COVID infection, demographic, socioeconomic, or crime-related factors.
15. This question was worded slightly differently between the first and second surveys. In the first survey, this question read, “Approximately what proportion of calls for service had your agency stopped responding to or changed its response to, based on the guidance issued?” This question was conditioned on a respondent answering “yes” to the previous question about providing specific and written guidance to officers on this (resulting in 9.9% missing answers on the second question from those who had answered “no”). In the second wave, we asked the question more specifically and without a conditional question: “Approximately what proportion of dispatched calls for service that officers previously responded to in person, were handled using a telephone, internet, or videoconferencing system?”
 16. We caution readers about this relationship as it is weak. In the first wave, this ordinal by ordinal crosstabulation revealed a Kendall’s tau-c of $-.070$, $p = .040$. In the second wave, tau-c = $-.058$, $p = .088$.
 17. In the first wave, the ordinal by ordinal crosstabulation between numbers of categories of numbers of sworn officers in [Figure 2](#) and decision to restrict community oriented policing activities revealed a Kendall’s tau-c of $-.150$, $p < .001$. In the second wave, tau-c = $-.100$, $p = .002$.
 18. See <https://www.odmp.org/search/year?year=2020>.

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