



COVID, Crime & Criminal Justice: Affirming the Call for System Reform Research

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Abstract

Early into the COVID-19 pandemic, Miller & Blumstein (2020) outlined a theoretical research program (TRP) oriented around themes of contagion control and containment, legal amnesty, system leniency, nonenforcement, and tele-justice. Here, two and a half years later, these lingering themes are revisited to advocate for empirical research informing criminal justice system reform. The pandemic created rare natural experiment research conditions that enable unique and potentially valuable insights on necessitated innovations that may indicate future justice practices and policies. Given the sweeping effects of the shutdown, examples are numerous ranging from staffing analyses to estimate agencies' personnel needs to ensure that basic public safety functions can be met after early retirements and resignations from virus risk and anti-police sentiment, the use of virtual communication in various legal proceedings at arrest, incarceration, and release junctures, and, especially, the risks versus benefits of early release. In addition to better identifying who should be jailed pre-trial, prioritization of calls for service, triaging of court cases, and hygiene and sanitation issues within facilities are other important examples central to a COVID and crime TRP. Attending research could demonstrate the utility of normative operations and identify shortfalls to be addressed during anomie conditions prior to another shutdown or similar event and present, through comparison of innovative and traditional derived outcomes, system reform and improvement opportunities. By seizing upon rare data made possible by natural experimental COVID generated conditions, researchers can meaningfully investigate the ongoing applicability of justice system adaptations mandated by the pandemic in terms of effectiveness and efficiency toward the interrelated goals of evidence-based practice discovery and justice reform.

Keywords COVID-19 · Decarceration · Pandemic · System reform · Criminal justice system · Crime

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Introduction

The COVID-19 pandemic induced a variety of major changes to the operation of criminal justice systems both in the United States and internationally as indicated by a quickly emergent and still growing COVID crime and justice literature (Baldwin et al., 2020; Buchanan et al., 2020; Campedelli et al., 2021; Jennings & Perez, 2020; Marcum, 2020; Piquero et al., 2021; Reid & Baglivio, 2022; Viglione et al., 2020; Wenger et al., 2022). Near the beginning of the pandemic, we suggested a framework encapsulating the intersection of COVID, crime, criminal justice, and related research needs to inform system improvement and potential reform opportunities (Miller & Blumstein, 2020). This synopsis identified justice themes integral to the virus control-justice nexus, including 1) general disengagement by law enforcement except for serious crimes, 2) attempts to reduce risks of contagion among prisoners and correctional staff, 3) a search for reasonable opportunities for amnesty through home confinement, and 4) tele-justice reliance, particularly for courts. The pandemic forced modifications in daily operations throughout the justice apparatus that, in turn, present opportunities for a reform-oriented TRP with clear pragmatic implications.

A considerable amount of literature on crime and justice during COVID has already emerged, including an initial pandemic themed issue of the *American Journal of Criminal Justice* (Volume 45, Issue 4, August 2020) in 2020 followed by issues in *Victims & Offenders* (Volume 15, Issue 7–8, 2020), *Criminology & Public Policy* (Volume 20, Issue 3, August 2021), *Journal of Contemporary Criminal Justice* (Volume 37, Issue 4, November 2021), *Current Issues in Criminal Justice* (Volume 33, Issue 1, 2021), and *International Criminology* (Volume 2, Issue 1, March 2022). Collectively, these journals, along with COVID-focused articles in additional journals, cover a broad range of crime and justice topics, although justice reform is a distinct common theme.

COVID-19 mandated responses across the three major prongs of the criminal justice system as well as for offender programming (e.g., substance abuse and mental health treatment, employment and housing assistance, medical care, and legal assistance). Many of the changes that have transpired since COVID signal research opportunities for system betterment in terms of effectiveness and efficiency. This commentary revisits central issues identified in Miller and Blumstein (2020) and by other scholars to reaffirm awareness of the one-off nature of COVID research opportunities to inform meaningful change with urgency before necessary time sensitive data lapses beyond capture. The pandemic prompted novel enforcement of social gatherings and violations of social distancing, masking, and similar restrictions, but also prompted many additional adaptations to normal system operations that may provide more effective approaches for operations and crime control policy more generally.

While COVID research invites system reform consideration, this applied focus has theoretical symmetry to frame studies. The virus gave rise to lockdowns, stay-at-home orders, and social distancing regulations, as well as business restrictions and total closures, widespread unemployment, and disrupted life routines with

people trapped at home under anomic conditions. These conditions and lifestyle changes necessitated by the pandemic directly point to the basic tenets of routine activities theory—motivated offenders, suitable targets, and absence of capable guardianship (Cohen & Felson, 1979)—as all of these were virus affected. Reduced and nonenforcement for lesser crimes, bail amnesty, reluctance to incarcerate, and prisoner release are but a few more examples of opportunities to empirically investigate and reaffirm system deterrent effects generally, and recidivism relative to community release, specifically. Below, we briefly describe crime trends during COVID before turning to more in-depth consideration of reform and enhancement opportunities across the justice apparatus.

Crime During COVID

Preliminary studies during the pandemic identified overall changes in crime, although crime rates appear to differ unequally across type, place, and time (Stickle & Felson, 2020). An early study examining the effects of stay-at-home orders on crime rates in San Francisco and Oakland identified overall decreases in crime by about 43% and 50%, respectively, following implementation of restrictive orders (Shayegh & Malpede, 2020). Findings from Vancouver, Canada are similar, with total crime decreasing despite previous trends suggesting the contrary (Hodgkinson & Andresen, 2020).

Nuanced empirical examination of crime rates is necessary given disproportionate impacts by crime type (Stickle & Felson, 2020). Perhaps the most serious crime problem during COVID was increased homicide. A study examining crime rates in 34 cities in the U.S., as well as the FBI's 2020 Uniform Crime Report, found that homicide rates were 30% higher in 2020 compared to the year prior, a historic increase, although remaining well below peak homicide rates in the early 1990s (Rosenfeld et al., 2021). Homicide rates further increased by 5% in 2021, compared to 2020, according to a follow-up study that examined 27 cities within the U.S (Rosenfeld & Lopez, 2022). Homicide also increased, especially in Chicago, after stay-at-home orders and the easing of social distancing ordinances along with other large U.S. cities starting in June 2020 (Kim & McCarty, 2021; Lopez & Rosenfeld, 2021). While there is no single explanation for the homicide increase, a spike in firearms purchases at the beginning of the pandemic and protests about police violence are hypothesized to have had an impact (Rosenfeld et al., 2021). However, a 2022 mid-year report suggests that 6-month homicide rates actually decreased by 2% between 2021 and 2022 (Rosenfeld et al., 2022).

Other aspects of domestic violence also increased following stay-at-home orders in the early months of the pandemic (Boman & Gallupe, 2020; Kaukinen, 2020; Piquero et al., 2020). An analysis of calls for service to police and emergency hotlines estimated that the pandemic-era produced an increase of approximately 2,700 domestic violence related calls from March to October 2020 in seven cities (Baltimore, Cincinnati, Hartford, Orlando, Sacramento, Salt Lake City, and St. Petersburg) (Richards et al., 2021) and another study estimated that domestic violence rose about 8% in the U.S., overall (Piquero et al., 2021). This

domestic violence-COVID relationship remains questionable, however, as a comparison of end-of-year domestic violence rates among 12 cities in 2019 and 2020 indicated little, if any, increase (Rosenfeld et al., 2021) and the Dallas findings have been compromised through challenge (Reingle Gonzalez et al., 2020).

Hate crimes increased against Asian Americans, who are significantly less likely to report such crimes to the police in comparison to non-Asian victims (about 53% less likely), suggesting victimization is higher than observed (Gover et al., 2020; Lantz & Wenger, 2021; Tessler et al., 2020). Household property crimes decreased, presumably due to increased guardianship via additional home presence, while other types of crime like fraud and cybercrime increased (Kennedy et al., 2021; Lopez & Rosenfeld, 2021; Payne, 2020; Rosenfeld et al., 2021). There was also an impressive drop in robbery (presumably fewer people on the street to be victimized) and residential burglary during the pandemic (Koppel et al., 2022; Lopez & Rosenfeld, 2021; Rosenfeld et al., 2021). Gun violence increased, a trend that was not seen in most other countries (Kim & Phillips, 2021; Lopez & Rosenfeld, 2021), commercial burglary logically increased during stay-at-home orders (Hodgkinson & Andresen, 2020), and drug offense rates decreased (Byrne et al., 2020; Lopez & Rosenfeld, 2021; Rosenfeld et al., 2021). This major decrease in arrests for drug crimes (30% decrease from 2019 to 2020 and 12% decrease from 2020 to 2021), is largely because of the general decrease in law enforcement manpower resulting from COVID contamination (Rosenfeld et al., 2021; Rosenfeld & Lopez, 2022; Vose et al., 2020b).

Scholars have also noted a continuation of traditional spatial crime pattern variation. An examination of arrests for violent crime during the stay-at-home orders in Miami-Dade County, for example, found incidents were primarily embedded in disadvantaged minority neighborhoods (Moise & Piquero, 2021). In fact, many of the areas that experienced increased crime since the beginning of the pandemic are officially designated economically disadvantaged areas that had high levels of unemployment and were broken windows locales already. Due to COVID, however, scholars have hypothesized that the pandemic only worsened existing concentrated disadvantage with increased crime an ostensible expectation (Gibbs et al., 2022; Kantamneni, 2020). Similarly, in-depth qualitative interviews with youth workers in Lansing, Michigan documented disadvantaged communities were seemingly facing the brunt of pandemic consequences (Gibbs et al., 2022). In another attempt to examine spatial change in violent crime, an examination of shooting violence in Buffalo, New York, following the implementation of stay-at-home orders, found that geographic hot spots of gun violence did not change but there was an increase in shootings in those areas (Drake et al., 2022). Yet another examination of New York City boroughs found similarities regarding the impact of stay-at-home orders on gun violence among all five boroughs, although following the George Floyd protests shootings decreased in one (Staten Island) while rising in others (Bronx, Brooklyn, Manhattan, and Queens) (Wolff et al., 2022). Comparable trends were also found for gang crime in Los Angeles following stay-at-home orders, with gang-related crime and geographical positioning remaining unchanged (Brantingham et al., 2021).

The Justice Apparatus During COVID

The decline in crime noted above reflect, in part, a reduction in calls for police service compared to pre-pandemic data—likely due to both less minor crime and intentional agency de-prioritization of certain crimes (Boman & Gallupe, 2020; Jennings & Perez, 2020), especially patrol encounters but also officer-initiated activities common in detective and narcotics work. Early studies during COVID reporting decreases in overall crime and calls for service may be deceiving, though, as the use of quarantine, stay-at-home orders, and lockdowns, while fundamental to reducing disease transmission, was not categorically advantageous and in some ways counterproductive regarding certain crimes. It is also likely that fear of contagion resulted in many incidents being addressed informally and victimization experienced without a report to police that would otherwise have involved the justice system.

The foremost observed impact of COVID across the criminal justice system has been staffing attrition (Vose et al., 2020b). Reductions in functional staff sizes associated with the contagion of COVID-19 across justice systems and wrap-around components is a lingering problem that pre-dates the virus that has only exponentially worsened a general manpower shortfall, most notably for law enforcement. Many police departments across the nation, especially in rural areas where the loss of even a few personnel represent a considerable percentage of the force, faced dire staffing shortages. An already strained manpower problem was exacerbated by officer absenteeism due to COVID related issues (i.e., infection, quarantine, hospitalization, death). COVID also prompted early retirements, and an unprecedented decline in applicants and recruits (Lum et al., 2020a, b). Devastating impacts of the pandemic persist with over 300 officer deaths in 2021 due to COVID-19 (the leading cause of officer death in 2021) and over 600 COVID-related deaths since March 2020 (National Law Enforcement Memorial and Museum, 2021). The shortage of law enforcement officers is the most intuitive explanation for increased forms of theft and violence such as open-air property crime and broad daylight shoplifting and ransacking of retail stores by mobs in urban centers often on the heels of nationally profiled police shootings providing a degree of blur between protestors and street thugs (Pyrooz et al., 2016; Wolff et al., 2022).

Crime spikes have led to renewed interest in determining the number of law enforcement officers really needed (Vose et al., 2020b). The Kansas City Preventative Patrol Experiment framed the question of "officers needed" under the premise that increasing police presence pushes crime detection and arrest, mostly vice and morality infractions, from one place to another within a jurisdiction but only minimally and temporarily reduces crime overall. Somewhat opposite, COVID has reframed the question of "officers needed" to: What is the minimum number of officers needed to deter crime surges as well as provide basic police services?

Throughout the courts, staffing shortages have resulted in courthouses being open for limited hours or closed altogether which have culminated in subsequent

delays in case processing. Adequate staffing within corrections agencies was also already a recurrent issue with the pandemic again only exacerbating the problem. High absence rates became pronounced among correctional officers and staff with vacancy rates in some locales exceeding 20% (Nowotny et al., 2021; Wetzel & Davis, 2020). Correctional staff were much more likely to test positive for the virus in comparison to the general public per COVID data from April 2020–January 2021 (Nowotny et al., 2021) and, within U.S. state and federal prison systems there have been 210,079 COVID-19 cases among prison staff with 278 resulting deaths as of July 1, 2022 (Byrne et al., 2020; Nowotny et al., 2021; The COVID Prison Project, 2022). The virus also compelled changes that yielded unintended consequences such as partial amnesty that postured law enforcement, the courts, and community corrections for rare empirical insights into atypical and novel practices for further consideration.

Law Enforcement At the beginning of the pandemic, many agencies advised officers to avoid non-essential interaction with the public thereby essentially ending officer-initiated activities and decreased traffic stops to, in turn, reduce jail overcrowding (Jennings & Perez, 2020; Leal et al., 2021; Lum et al., 2020a, b; Mohler et al., 2020). Research analyzing arrests after the imposition of stay-at-home orders in Boston, Charleston, Pittsburgh, and San Francisco found the most prominent rates of decrease to be among drug arrests (54%) (Jahn et al., 2022). The majority of U.S. citizens report supporting de-emphasizing drug enforcement (54%), while similar proportions support the enforcement of ordinances pertaining to social distancing (52%) and the prohibition of large gatherings (55%) (Nix et al., 2021). On the contrary, many in law enforcement argue that enforcing stay-at-home orders is a poor use of resources although many did enforce lockdown orders and social distancing ordinances (White & Fradella, 2020). While trying to ensure safety while avoiding proximity with community members during heightened anti-police sentiment and racial strife from the BLM movement, many urban agencies were forced to manage riots, protests, and major calls for service while coronavirus remained an active threat (Jaffe et al., 2021; Lum et al., 2020a, b; Stogner et al., 2020).

Courts With the implementation of stay-at-home orders, courts hastily transitioned to online formats, with delays or closings creating a backlog of cases and trials. They implemented procedural changes to limit contagion, most notably suspension of in-person court hearings and transition to virtual court proceedings, that were accompanied with online court security concerns, jury selection and deliberations, and technology functionality (Baldwin et al., 2020; Byrne et al., 2020). The utilization of a technological environment was an easier transition for some court responsibilities in comparison to others, which resulted in courts triaging or prioritizing the most critical cases (Baldwin et al., 2020). Other general adaptations included changes to the frequency of drug tests and holding staffing meetings virtually (Baldwin et al., 2020; Hartsell & Lane, 2022). This use of technology among the courts has the potential to make court proceedings more efficient and convenient as we move back into normal operations, suggesting perhaps we should not.

Prior to the pandemic, over 95% of criminal convictions were a result of guilty pleas in the United States (Reaves, 2013); during the pandemic, the nature of plea bargaining changed due to COVID. The use of plea bargaining has increased in response to the pandemic, which has only exacerbated existing concerns regarding coercion such as pressure to accept a plea deal to avoid jail time due to COVID conditions (Baldwin et al., 2020). In a survey of 93 U.S. defense attorneys, most agreed that plea bargaining changed during the pandemic (Daftary-Kapur et al., 2021) with observations of both atypical degrees of leniency and punitiveness (Daftary-Kapur et al., 2021). An experimental study utilized a computer simulation to explore the impact of the pandemic on plea bargaining when faced with pre-trial detention. Among a sample of 704 individuals, the participants (whether guilty or not) were more likely to accept a guilty plea to avoid exposure to the virus (Wilford et al., 2021). Interestingly, COVID concerns had a larger influence on those that were innocent (and accepted a plea) in comparison to those that were guilty. Plea bargaining before, and even more so during, the pandemic likely generated systematic disproportionate outcomes always of interest to, especially critical, criminologists.

Corrections COVID exacerbated the spread of the virus among incarcerated individuals, as well as individuals employed at correctional institutions (Wallace et al., 2021). Correctional workers, in fact, have been found far more likely than the general public and twice more likely than other criminal justice practitioners to have contracted the virus (Nowotny et al., 2021). Within U.S. state and federal prisons, as of July 1, 2022, there were 596,281 COVID-19 cases among inmates and 2,899 resulting deaths according to recent data from The COVID Prison Project (2022), although it is likely these losses are underestimated (Byrne et al., 2020; Nowotny et al., 2021).

In an attempt to limit the transmission of the virus among the incarcerated, jails and prisons released individuals where possible that many interpreted as generalized amnesty. Within the U.S. in particular, early release mechanisms were frequently used as a back-end mitigation strategy (Byrne et al., 2020). Many jails reduced their inmate populations, prisons halted the transfer of inmates from jails, and state and federal prisons released over 100,000 individuals (from March 2020–June 2020) – collectively representing an 11.8% decrease among the overall inmate population (March 2020–August 2020) (ACLU Analytics, 2020; Byrne et al., 2020; Collica-Cox & Molina, 2020; Hummer, 2020; Sharma et al., 2020). Staff reviewed offender populations to identify those incarcerated for technical violations and low-level offenses for early release consideration, while similar reviews took place for inmates at increased risk of contracting COVID such as prisoners of advanced age and the immunocompromised (Abraham et al., 2020; Marcum, 2020; Wallace et al., 2021). The risk-need-responsivity and similar models should guide targeted release in order to identify those that pose the least public safety risk, while reducing crowding within institutions to limit the spread of the virus (Vose et al., 2020a). In the wake of more empirical work surrounding

decarceration and the need to address overcrowding within correctional facilities, if individuals released early represent a minimal threat to public safety, evaluation of the consequences of these release policies provide an opportunity for future sentencing policy reform.

Regulations implemented among the general society were nearly impossible to carry out without adequate space, such as social distancing, given crowded conditions (Abraham et al., 2020; Wallace et al., 2021). Unsurprisingly, evidence indicates that overcrowding within U.S. prisons increases transmission rates of COVID-19 (Vest et al., 2021). While correctional facilities are no stranger to communicable diseases, COVID compelled a wide range of reactions within jails and prisons in an attempt to reduce the spread of the virus. Institutions employed a variety of mitigation strategies to limit spread, such as the creation of quarantine quarters and suspending offender programming. The spread of the virus especially emphasized the importance of a detox area and mandatory quarantine regulations in a logic of “patient cohorting” (Lemieux et al., 2020; Marcum, 2020). Among jails in particular, sentences are short and a large portion of individuals are being held pretrial meaning there is a greater level of offender movement within facilities. Toward this end, facilities created spaces for those found to test positive for COVID (hot zones), those awaiting the results of a test (warm zones), and those who do not have the virus (cold zones) (Lemieux et al., 2020). Patient cohorting may be useful to control other communicable diseases often found within correctional institutions, such as tuberculosis, hepatitis, and sexually transmitted diseases. With increased isolation periods among inmates and risks surrounding non-essential employees entering facilities, most programming (e.g., education, substance abuse, mental health, employment) in the U.S. faced cancellation (Byrne et al., 2020; Lemieux et al., 2020; Pyrooz et al., 2020). Among facilities that did not cancel programming, the use of technology became integral to maintaining the programs (Collica-Cox & Molina, 2020). It would be useful to see evaluations of the changes to measure the degradation, or possible improvement, of such adaptations.

In an effort to further reduce contagion most, if not all, jails and prisons adopted restrictions to face-to-face visitation. In fact, an early examination of fifty-one correctional jurisdictions (all fifty states and the Federal Bureau of Prisons) websites indicated that all jurisdictions halted visitation (Marcum, 2020; Novisky et al., 2020). When examining pandemic impact on correctional systems throughout the world, the most common method to limit movement of the virus into facilities among the five largest countries in the review (U.S., China, Brazil, Russian Federation, and India) was the suspension of visitation (Byrne et al., 2020). To offset the suspension of face-to-face visitation, many correctional facilities have provided concessions to allow incarcerated individuals the opportunity to maintain communication with those outside jail and prison walls, including increased access to or free/reduced charges for phone calls, virtual visitation, emails, and stamps (Novisky et al., 2020). For example, the Federal Bureau of Prisons gave each individual 500 phone minutes and a New York jail provided free calling cards and video options at a reduced rate (Collica-Cox & Molina, 2020; Marcum, 2020). In turn, the Westchester County Department of Correction, a county jail in New York State, reported a significant increase in the number of calls from the facility pre-pandemic (1,700)

compared to during the pandemic (4,000) (Collica-Cox & Molina, 2020). Findings from self-report surveys of incarcerated individuals within a Midwestern medium-security facility indicate that inmates believe such visitation keeps them out of trouble and connected to their support systems (Canada et al., 2022). As prisons and jails return to pre-pandemic operations, correctional institutions, and the people they house, may be better served by continuing to make use of technology, such as video conferencing, to facilitate visitation beyond face-to-face or telephone communications.

General hygiene and sanitation were frequently lacking within institutions prior to the pandemic, often including, but not limited to, a general lack of access to hand sanitizer, tissues, and surface disinfectants (Novisky et al., 2021). An early examination of fifty-one correctional jurisdictions (all fifty states and the Federal Bureau of Prisons) websites found that while sanitation efforts had increased since the start of the pandemic, endeavors were highly variable across jurisdictions (Novisky et al., 2020). Hand sanitizer, for example, was not available in most jurisdictions as it is considered contraband (out of fear that inmates may consume it), with only ten jurisdictions indicating sanitizer was available without restraint. A New York jail advocated for increased sanitation within the facility by adding hand sanitizing stations (Collica-Cox & Molina, 2020). There have been calls for correctional institutions to increase the accessibility of hand sanitizers and disinfect high-touch surfaces (e.g., doors, dining hall, shared surfaces) in betterment of public health and criminal justice system operations (Lemieux et al., 2020; Novisky et al., 2020).

An often-overlooked part of the criminal justice system that was particularly challenged is community corrections, including probation and parole services. Given increased decarceration during COVID, community corrections assumed increased burdens and oversight of multiple services similar to reentry management but on a much larger scale. While new offense management remained largely normative, technical violations were largely handled informally with clear revocation emphasis on violations that endanger the public (Powell et al., 2022). Among a sample of community corrections agencies in the U.S., 75% reported a decrease in the processing of technical violations (Viglione et al., 2020) – important data supporting calls for a moratorium on incarcerating many otherwise revocable offenses or individuals (Byrne et al., 2020; Marcum, 2020).

Reduced client contact and in-person interaction seemed to present client accountability issues including limited and irregular drug testing due to social distancing concerns and testing business closures, fewer revocations due to the case backlogs, decreased attention to minor violations, and the restriction of incapacitation as a sanction as many jails refused to incarcerate for probation violations or judges would not sentence individuals to incarceration (Cohen & Starr, 2021; Viglione et al., 2020). Treatment courts also faced challenges imposed by the pandemic due to the transition to online and hybrid formats. At the Marion County, Florida, Diversion Drug Court, for example, zoom interviews and meetings were convenient for clients (e.g., transportation to court was a non-issue) and court staff (Hartsell & Lane, 2022) but somewhat offset by poor internet connections, difficulties checking in with those in jail, and home distractions during sessions—all of which would be irrelevant with traditional in-person hearings.

With the issuance of stay-at-home orders, the implementation of social distance regulations, businesses shutting down, and people staying home, face-to-face meetings with probation and parole officers largely halted at the state and federal levels as officers in many jurisdictions began utilizing video technology or phone calls to check-in with clients. With the goal of understanding supervision strategies before and after the onset of COVID, a survey of 1,054 probation officers in the U.S. indicated that more check-ins were indeed held virtually (Schwalbe & Koetzle, 2021) and, in a related study, a survey of 213 community corrections administrators within the U.S. observed that 96% had transferred to telecommunication oversight with a surprising 81% also reporting using video technology (Viglione et al., 2020). Among federal probation and pretrial chiefs, phone calls (85%), texting (72%), and video technology (62%) were the primary modes of communication in lieu of face-to-face supervision (Cohen & Starr, 2021). As we return to business as usual in an increasingly technological world, virtual communication in community corrections, augmented by personal interaction as needed, can provide more flexible and efficient supervision (Cohen & Starr, 2021; Powell et al., 2022; Vuolo et al., 2022).

Lessons from COVID for Justice Reform and Future Crises

While disruptions of applied criminological research agendas and program evaluations resulted from the pandemic, the offset is the appearance of rare natural experimental conditions. Research opportunities have arisen from COVID that have, in turn, provided opportunities to glean insights about system reform that otherwise would have not been possible or practical. Fortunately, next step needs for applied research to improve policies and operations across the three prongs of the criminal justice system are ample and immediate.

Law Enforcement During the pandemic, police dealt with many hardships, including exposure to COVID, protests following stay-at-home orders, and again after the death of George Floyd, adapting practices in many respects. Further research is needed to understand the impact of COVID on officers, including stress and mental health, and also examine the changes that the pandemic had on both short-term and long-term police practices. Given the many pressures facing police during the pandemic, staffing analyses must better estimate staff absence as a function of virus cases and hospitalizations, deaths, as well as early retirements and resignations and how manpower shortages impact police response and reprioritization of crime and service objectives.

Courts As many courts continue to utilize virtual options, they must develop online court participation policies to minimize disruption. Future research must evaluate the effectiveness of such changes, although it will prove difficult given the lack of data tracked regarding COVID among courts or court staff. Research should also consider modifications in jail-holding policies, including pre-trial detention, and sentencing policies to reduce both contagion impacts as well as over-incarceration. Examination of the effectiveness of offender treatment programming adaptations

in particular should be recorded, along with the impact on clients given format changes. Other modifications made to court practices that may improve general operations must be evaluated, such as the triaging of cases. We certainly should consider how some of the responses to COVID within the courts may become a part of normal operations moving forward.

Corrections Within corrections, we must develop effective vaccine policies and prioritize inmate and staff health given the increased risk of outbreaks within institutions and subsequently communities. As of July 1, 2022, 550,132 inmates and 135,508 staff have received at least one dose of a COVID vaccine (The COVID Prison Project, 2022) that should enable examination per comparison of vaccinated and non-vaccinated subpopulations of inmates and prisoners. Future research could meaningfully inform inmate placement via scrutiny of the impact that patient cohorting and discontinuation of programming had on inmate wellbeing, including the influence on mental health, substance use, and programming success (Byrne et al., 2020). Early release and home confinement mitigated most virus consequences within facilities, although safe release policies and principles require development with important concerns for public safety, and subsequent crime and recidivism impacts estimated. Other modifications have been made to regular corrections practices that may improve operations and therefore require evaluation, such as which modes of visitation should be offered, standards for general hygiene and sanitation, and telehealth in offender treatment programs.

The release of more individuals into the community can inform the design of reentry principles and programs. While there is no evidence to suggest that early release due to the virus has impacted recidivism, either positively or negatively, data to examine such outcomes is needed but has not been collected (Byrne et al., 2020). Although, large-scale early release due to the virus could well reduce aggregate recidivism assuming those released early were carefully reviewed by releasing authorities, the cohort in question might actually pose less risk than those near or at sentencing. In regard to community supervision, future research should also examine the impact of changes in supervision practices such as the continued or sole use of video or phone technology, the effectiveness of such changes with respect to outcomes, and with which individuals this type of supervision is most effective in order to reveal the role of technological advances in reforming probation and parole. The pandemic has illuminated the lack of basic data available about correctional systems, particularly community corrections, in several areas needing improvement in order to rigorously evaluate efficiency and effectiveness (Byrne et al., 2020).

Criminal Justice System Within the criminal justice system more generally, we must collect better data regularly in order to analyze a variety of issues, trends, and the effectiveness of practices. In light of the state of the empirical literature, there is a need for longer follow-up periods to examine crime across type, place, and time, including before, during, and after COVID-19 restrictions. Spatial and temporal

concerns must be considered in conjunction with confounding factors, such as protests, the opioid epidemic, and national mental health crisis. We must continue to examine changes in patterns of crime, particularly pertaining to homicide and gun violence, to examine whether there is a relationship between COVID mitigation decisions and related increases. Future research must critically examine data made available to the public, as the pandemic's impact on the system may impact the quality of data reported and produced. Qualitative research is essential to obtain a clearer view of what is actually happening inside the system and how data, in turn, is impacted. Finally, we must evaluate the effects of prevention measures to examine both positive and negative impacts, along with a broader assessment of newly adopted COVID-era crime prevention efforts.

For criminologists working in the overlapping areas of race, crime, and social justice, the virus again effected disproportionate system experiences across demographics. Across the three prongs of the criminal justice system, the effects of COVID-19 varied by age, race, social class, and gender. Among America's aging correctional population, many have chronic health conditions that, in conjunction with COVID, presented heightened health risks (Carson & Sabol, 2016) which should be weighted in quantitative examinations so as to not overestimate risk for all. Incarcerated individuals are also at a greater risk of transmission in general and Latino and Black inmates are most at risk which is similar to racial inequalities among those supervised in the community (Gutierrez & Patterson, 2021). Upon examination of U.S. probation and parole agent COVID cases between May and June of 2020, for example, Latino and Black individuals on supervision were more likely to test positive or suspect infection compared to Whites (Schwalbe & Koetzle, 2021) and a survey of state correctional facilities found minority males again at an increased risk of chronic illness and even more so for those with longer sentences, repeat incarcerations, and advanced age (Hughes & Prior, 2021). In short, minority males have been found to contract the virus at a rate twice that of White males (Gibson, 2020). Correctional scholars can engage COVID-19's impact and corresponding justice system responses toward elevated social justice within the system per increased scrutiny of treatment per offender age, race, gender, and risk classification.

While COVID influenced law enforcement, courts, and corrections independently, it is also important to consider insights for the entire criminal justice system reform and improvement. In light of the fragmentation of the U.S. justice system, it has long been argued that we must adopt a systems approach that utilizes empirical findings and data as the basis to enacting change to justice policy (Blumstein, 1967; Mears, 2017). Subsystems, such as law enforcement, courts, and corrections, despite being disintegrated, must work together to accomplish common goals, such as effectiveness and public safety. In line with this systems approach, COVID has shown how subsystems interact in important ways and provides a rare opportunity for the justice system to be reimagined. This reconceptualization might include an increased reliance on evaluation research, the inclusion of different stakeholders in research processes, and a single agency tasked with general system monitoring and oversight (Mears, 2017, 2019). Improvements made to the criminal justice system

improve the likelihood that it can accomplish desired goals which are for the common good and should continue to be supported.

COVID is a part of a larger subclass of a broader topic, crises. Moving forward, the COVID crisis has created opportunities to highlight faultiness, issues, and opportunities for reform within the criminal justice system and similar social institutions during anomic circumstances. Moving on it would be helpful to be mindful of crises falling short of a pandemic level but nonetheless useful for conceptualization and anticipation of likely threats and problems.

History suggests that reversion to the 'status quo' is likely and a return to pre-pandemic operations probable. In this age of evidence-based practice and system accountability, it is important to beat the metaphorical research drum louder as the natural experimental conditions posed by COVID-19 are time sensitive and data dependent – surely urgency is at a premium regarding data collection and engagement. Most of the topics identified herein remain under-attended if not altogether neglected – research questions and opportunities abound. By conducting rigorous empirical research denoting efficiency and effectiveness opportunities, criminologists can promote and advocate for needed and helpful criminal justice reform through scientific demonstration of preferable outcomes for offenders and the public in what very well may be a once in a lifetime situation.

References

- Abraham, L. A., Brown, T. C., & Thomas, S. A. (2020). How COVID-19's disruption of the U.S. correctional system provides an opportunity for decarceration. *American Journal of Criminal Justice*, 45(4), 780–792.
- ACLU Analytics. (2020). Decarceration and crime during COVID-19. American Civil Liberties Union.
- Baldwin, J. M., Eassey, J. M., & Brooke, E. J. (2020). Court operations during the COVID-19 pandemic. *American Journal of Criminal Justice*, 45(4), 743–758.
- Blumstein, A. (1967). Systems analysis and the criminal justice system. *The Annals of the American Academy of Political and Social Science*, 374(1), 92–100.
- Boman, J. H., & Gallupe, O. (2020). Has COVID-19 changed crime? Crime rates in the United States during the pandemic. *American Journal of Criminal Justice*, 45(4), 537–545.
- Brantingham, P. J., Tita, G. E., & Mohler, G. (2021). Gang-related crime in Los Angeles remained stable following COVID-19 social distancing orders. *Criminology & Public Policy*, 20(3), 423–436.
- Byrne, J., Rapisarda, S. S., Hummer, D., & Kras, K. R. (2020). An imperfect storm: Identifying the root causes of COVID-19 outbreaks in the world's largest corrections systems. *Victims & Offenders*, 15(7–8), 862–909.
- Buchanan, M., Castro, E. D., Kushner, M., & Krohn, M. D. (2020). It's f**ing chaos: COVID-19's impact on juvenile delinquency and juvenile justice. *American Journal of Criminal Justice*, 45(4), 578–600.
- Campedelli, G. M., Aziani, A., & Favarin, S. (2021). Exploring the immediate effects of COVID-19 containment policies on crime: An empirical analysis of the short-term aftermath in Los Angeles. *American Journal of Criminal Justice*, 46(5), 704–727.
- Canada, K. E., Huebner, B. M., Garcia-Hallett, J., Givens, A., Inzana, V., Taylor, E., & Peters, C. M. (2022). Community-engaged prison-based research in a pandemic: The efficacy of summative content analysis for understanding prison culture and climate. *Journal of Crime and Justice*. <https://doi.org/10.1080/0735648X.2022.2072364>
- Carson, E. A., & Sabol, W. J. (2016). *Aging of the state prison population, 1993–2013 (NCJ 248766)*. Bureau of Justice Statistics.

- Cohen, L. E., & Felson, M. (1979). Social change and crime rate trends: A routine activity approach. *American Sociological Review*, 44(4), 588–608.
- Cohen, T. H., & Starr, V. L. (2021). Survey of U.S. Probation and Pretrial Services Agencies' adaptations to COVID-19. *Federal Probation*, 85(1), 14–23.
- Collica-Cox, K., & Molina, L. (2020). A case study of the Westchester County New York's jail response to COVID-19: Controlling COVID while balancing service needs for the incarcerated- A national model for jails. *Victims & Offenders*, 15(7–8), 1305–1316.
- Daftary-Kapur, T., Henderson, K. S., & Zottoli, T. M. (2021). COVID-19 exacerbates existing system factors that disadvantage defendants: Findings from a national survey of defense attorneys. *Law and Human Behavior*, 45(2), 81–96.
- Drake, G., Wheeler, A. P., Kim, D.-Y., Phillips, S. W., & Mendolera, K. (2022). The impact of COVID-19 on the spatial distribution of shooting violence in Buffalo, NY. *Journal of Experimental Criminology*. <https://doi.org/10.1007/s11292-021-09497-4>
- Gibbs, C., De Biasi, A., Cobbina-Dungy, J. E., Speers, M., Costantino, M., & Rivers III, L. (2022). COVID-19 and youth violence: Views from the frontline. *Journal of Crime and Justice*. <https://doi.org/10.1080/0735648X.2022.2063156>
- Gibson, B. (2020). NCHC survey yields insights into COVID-19 in U.S. correctional facilities. *Journal of Correctional Health Care: The Official Journal of the National Commission on Correctional Health Care*, 26(3), 204–206.
- Gover, A. R., Harper, S. B., & Langton, L. (2020). Anti-Asian hate crime during the COVID-19 pandemic: Exploring the reproduction of inequality. *American Journal of Criminal Justice*, 45(4), 647–667.
- Gutierrez, C., & Patterson, E. J. (2021). Risk and implications of COVID-19 among the community supervised population. *Criminology & Public Policy*, 20(3), 437–461.
- Hartsell, E., & Lane, J. (2022). Initial lessons learned during a remote drug court evaluation during the COVID-19 pandemic. *Journal of Crime and Justice*, 45(5), 627–645.
- Hodgkinson, T., & Andresen, M. A. (2020). Show me a man or a woman alone and I'll show you a saint: Changes in the frequency of criminal incidents during the COVID-19 pandemic. *Journal of Criminal Justice*, 69, 1–13.
- Hughes, M. H., & Prior, N. (2021). Impacts of incarceration on health focusing on minority males: Considerations for COVID-19 and future pandemics. *Journal of Contemporary Criminal Justice*, 37(4), 502–522.
- Hummer, D. (2020). United States Bureau of Prisons' response to the COVID-19 pandemic. *Victims & Offenders*, 15(7–8), 1262–1276.
- Jaffe, E., Sonkin, R., Strugo, R., & Zerath, E. (2021). Evolution of emergency medical calls during a pandemic – An emergency medical service during the COVID-19 outbreak. *The American Journal of Emergency Medicine*, 43, 260–266.
- Jahn, J. L., Simes, J. T., Cowger, T. L., & Davis, B. A. (2022). Racial disparities in neighborhood arrest rates during the COVID-19 pandemic. *Journal of Urban Health*, 99(1), 67–76.
- Jennings, W. G., & Perez, N. M. (2020). The immediate impact of COVID-19 on law enforcement in the United States. *American Journal of Criminal Justice*, 45(4), 690–701.
- Kantamneni, N. (2020). The impact of the COVID-19 pandemic on marginalized populations in the United States: A research agenda. *Journal of Vocational Behavior*, 119, 1–4.
- Kaukinen, C. (2020). When stay-at-home orders leave victims unsafe at home: Exploring the risk and consequences of intimate partner violence during the COVID-19 pandemic. *American Journal of Criminal Justice*, 45(4), 668–679.
- Kennedy, J. P., Rorie, M., & Benson, M. L. (2021). COVID-19 frauds: An exploratory study of victimization during a global crisis. *Criminology & Public Policy*, 20(3), 493–543.
- Kim, D.Y., & McCarty, W. P. (2021). Exploring violent crimes in Chicago during the COVID-19 pandemic: Do location, crime type, and social distancing type matter? *Journal of Crime and Justice*, 45(4), 522–537.
- Kim, D. Y., & Phillips, S. W. (2021). When COVID-19 and guns meet: A rise in shootings. *Journal of Criminal Justice*, 73, 1–10.
- Koppel, S., Capellan, J. A., & Sharp, J. (2022). Disentangling the impact of COVID-19: An interrupted time series analysis of crime in New York city. *American Journal of Criminal Justice*. <https://doi.org/10.1007/s12103-021-09666-1>

- Lantz, B., & Wenger, M. R. (2021). Are Asian victims less likely to report hate crime victimization to the police? Implications for research and policy in the wake of the COVID-19 pandemic. *Crime & Delinquency*, 68(8), 1292–1319.
- Leal, W. E., Kurland, J., Piquero, A. R., Gloyd, E. L., & Piquero, N. L. (2021). Where, when, and by whom: An exploratory analysis of COVID-19 public health violations. *Journal of Contemporary Criminal Justice*, 37(4), 523–542.
- Lemieux, A. J., Dumais Michaud, A. A., Damasse, J., Morin-Major, J. K., Nguyen, T. N., Lesage, A., & Crocker, A. G. (2020). Management of COVID-19 for persons with mental illness in secure units: A rapid international review to inform practice in Québec. *Victims & Offenders*, 15(7–8), 1337–1360.
- Lopez, E., & Rosenfeld, R. (2021). Crime, quarantine, and the U.S. coronavirus pandemic. *Criminology & Public Policy*, 20(3), 401–422.
- Lum, C., Maupin, C., & Stoltz, M. (2020a). The impact of COVID-19 on law enforcement agencies (Wave 1). Retrieved June 21, 2022, from <https://www.theiacp.org/sites/default/files/IACP-GMU%20Survey.pdf>
- Lum, C., Maupin, C., & Stoltz, M. (2020b). The impact of COVID-19 on law enforcement agencies (Wave 2). Retrieved June 21, 2022, from https://www.theiacp.org/sites/default/files/IACP_Covid_Impact_Wave2.pdf
- Marcum, C. D. (2020). American corrections system response to COVID-19: An examination of the procedures and policies used in spring 2020. *American Journal of Criminal Justice*, 45(4), 759–768.
- Mears, D. P. (2017). *Out-of-control criminal justice: The systems improvement solution for more safety, justice, accountability, and efficiency*. Cambridge University Press.
- Mears, D. P. (2019). Creating systems that can improve safety and justice (and why piecemeal change won't work). *Justice Evaluation Journal*, 2(1), 1–17.
- Miller, J. M., & Blumstein, A. (2020). Crime, justice & the COVID-19 pandemic: Toward a national research agenda. *American Journal of Criminal Justice*, 45, 515–524.
- Mohler, G., Bertozzi, A. L., Carter, J., Short, M. B., Sledge, D., Tita, G. E., Uchida, C. D., & Brantingham, P. J. (2020). Impact of social distancing during COVID-19 pandemic on crime in Los Angeles and Indianapolis. *Journal of Criminal Justice*, 68, 1–7.
- Moise, I. K., & Piquero, A. R. (2021). Geographic disparities in violent crime during the COVID-19 lockdown in Miami-Dade County, Florida, 2018–2020. *Journal of Experimental Criminology*. <https://doi.org/10.1007/s11292-021-09474-x>
- National Law Enforcement Memorial and Museum. (2021). 2021 end-of-year preliminary law enforcement officers fatalities report. <https://nleomf.org/wp-content/uploads/2022/01/2021-EOY-Fatality-Report-Final-web.pdf>
- Nix, J., Ivanov, S., & Pickett, J. T. (2021). What does the public want police to do during pandemics? A national experiment. *Criminology & Public Policy*, 20(3), 545–571.
- Novisky, M. A., Narvey, C. S., & Semenza, D. C. (2020). Institutional responses to the COVID-19 pandemic in American prisons. *Victims & Offenders*, 15(7–8), 1244–1261.
- Novisky, M. A., Nowotny, K. M., Jackson, D. B., Testa, A., & Vaughn, M. G. (2021). Incarceration as a fundamental social cause of health inequalities: Jails, prisons and vulnerability to COVID-19. *The British Journal of Criminology*, 61(6), 1630–1646.
- Nowotny, K. M., Seide, K., & Brinkley-Rubinstein, L. (2021). Risk of COVID-19 infection among prison staff in the United States. *BMC Public Health*, 21(1), 1–8.
- Payne, B. K. (2020). Criminals work from home during pandemics too: A public health approach to respond to fraud and crimes against those 50 and above. *American Journal of Criminal Justice*, 45(4), 563–577.
- Piquero, A. R., Jennings, W. G., Jemison, E., Kaukinen, C., & Knaul, F. M. (2021). Domestic violence during the COVID-19 pandemic—Evidence from a systematic review and meta-analysis. *Journal of Criminal Justice*, 74, 1–10.
- Piquero, A. R., Riddell, J. R., Bishopp, S. A., Narvey, C., Reid, J. A., & Piquero, N. L. (2020). Staying home, staying safe? A short-term analysis of COVID-19 on Dallas domestic violence. *American Journal of Criminal Justice*, 45(4), 601–635.
- Powell, K., Hyatt, J. M., & Link, N. W. (2022). Implementing reforms in community corrections: Lessons learned during the COVID-19 pandemic. *Crime & Delinquency*, 68(8), 1223–1246.
- Pyrooz, D. C., Decker, S. H., Wolfe, S. E., & Shjarback, J. A. (2016). Was there a Ferguson Effect on crime rates in large U.S. cities? *Journal of Criminal Justice*, 46, 1–8.

- Pyrooz, D. C., Labrecque, R. M., Tostlebe, J. J., & Useem, B. (2020). Views on COVID-19 from inside prison: Perspectives of high-security prisoners. *Justice Evaluation Journal*, 3(2), 294–306.
- Reaves, B. A. (2013). *Felony defendants in large urban counties, 2009—Statistical tables (NCJ 243777)*. Bureau of Justice Statistics.
- Reid, J. A., & Baglivio, M. T. (2022). COVID-19's impact on crime and delinquency. *Crime & Delinquency*, 68(8), 1127–1136.
- Reingle Gonzalez, J. M., Molsberry, R., Maskaly, J., & Jetelina, K. K. (2020). Trends in family violence are not causally associated with COVID-19 stay-at-home orders: A commentary on Piquero et al. *American Journal of Criminal Justice*, 45(6), 1100–1110.
- Richards, T. N., Nix, J., Mourtgos, S. M., & Adams, I. T. (2021). Comparing 911 and emergency hotline calls for domestic violence in seven cities: What happened when people started staying home due to COVID-19? *Criminology & Public Policy*, 20(3), 573–591.
- Rosenfeld, R., Abt, T., & Lopez, E. (2021). *Pandemic, social unrest, and crime in U.S. cities: 2020 year-end update*. Council on Criminal Justice.
- Rosenfeld, R., Boxerman, B., & Lopez, E. (2022). *Pandemic, social unrest, and crime in U.S. cities: Mid-year 2022 update*. Council on Criminal Justice.
- Rosenfeld, R., & Lopez, E. (2022). *Pandemic, social unrest, and crime in U.S. cities: 2021 year-end update*. Council on Criminal Justice.
- Schwalbe, C. S. J., & Koetzle, D. (2021). What the COVID-19 pandemic teaches about the essential practices of community corrections and supervision. *Criminal Justice and Behavior*, 48(9), 1300–1316.
- Sharma, D., Li, W., Lavoie, D., & Lauer, C. (2020). *Prison populations drop by 100,000 during pandemic: But not because of COVID-19 releases*. The Marshall Project.
- Shayegh, S., & Malpede, M. (2020). *Staying home saves lives, really!* (SSRN Scholarly Paper No. 3567394). Social Science Research Network.
- Stickle, B., & Felson, M. (2020). Crime rates in a pandemic: The largest criminological experiment in history. *American Journal of Criminal Justice*, 45(4), 525–536.
- Stogner, J., Miller, B. L., & McLean, K. (2020). Police stress, mental health, and resiliency during the COVID-19 pandemic. *American Journal of Criminal Justice*, 45(4), 718–730.
- Tessler, H., Choi, M., & Kao, G. (2020). The anxiety of being Asian American: Hate crimes and negative biases during the COVID-19 pandemic. *American Journal of Criminal Justice*, 45(4), 636–646.
- The COVID Prison Project. (2022). The COVID Prison Project tracks data and policy across the country to monitor COVID-19 in prisons. Retrieved July 2, 2022, from <https://covidprisonproject.com/>
- Vest, N., Johnson, O., Nowotny, K., & Brinkley-Rubinstein, L. (2021). Prison population reductions and COVID-19: A latent profile analysis synthesizing recent evidence from the Texas State Prison System. *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, 98(1), 53–58.
- Viglione, J., Alward, L. M., Lockwood, A., & Bryson, S. (2020). Adaptations to COVID-19 in community corrections agencies across the United States. *Victims & Offenders*, 15(7–8), 1277–1297.
- Vose, B., Cullen, F. T., & Lee, H. (2020a). Targeted release in the COVID-19 correctional crisis: Using the RNR model to save lives. *American Journal of Criminal Justice*, 45(4), 769–779.
- Vose, B., Miller, J. M., & Koskinen, S. (2020b). Law enforcement manpower analysis: An enhanced calculation model. *Policing: An International Journal*, 43(3), 511–523.
- Vuolo, M., Schneider, L. E., & LaPlant, E. G. (2022). Surveillance and the experience of the COVID-19 pandemic for formerly incarcerated individuals. *Punishment & Society*. <https://doi.org/10.1177/14624745221080696>
- Wallace, D., Walker, J., Nelson, J., Towers, S., Eason, J., & Grubestic, T. H. (2021). The 2020 coronavirus pandemic and its corresponding data boon: Issues with pandemic-related data from criminal justice organizations. *Journal of Contemporary Criminal Justice*, 37(4), 543–568.
- Wenger, M. R., Lantz, B., & Gallardo, G. (2022). The role of hate crime victimization, fear of victimization, and vicarious victimization in COVID-19-related depression. *Criminal Justice and Behavior*, 49(12), 1746–1762.
- Wetzel, J. E., & Davis, J. M. (2020). The response to the COVID-19 crisis by the Pennsylvania Department of Corrections. *Victims & Offenders*, 15(7–8), 1298–1304.
- White, M. D., & Fradella, H. F. (2020). Policing a pandemic: Stay-at-home orders and what they mean for the police. *American Journal of Criminal Justice*, 45(4), 702–717.
- Wilford, M. M., Zimmerman, D. M., Yan, S., & Sutherland, K. T. (2021). Innocence in the shadow of COVID-19: Plea decision making during a pandemic. *Journal of Experimental Psychology: Applied*, 27(4), 739–750.

Wolff, K. T., Intravia, J., Baglivio, M. T., & Piquero, A. R. (2022). Violence in the Big Apple throughout the COVID-19 pandemic: A borough-specific analysis. *Journal of Criminal Justice, 81*, 1–13.

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