CODE

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OPEN DATA FOR RACIAL EQUITY

A Briefing Paper on Policing Data

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INTRODUCTION

The police killings of Breonna Taylor and George Floyd, and the shooting of Jacob Blake, have reignited nationwide calls for both police reform and a better understanding of institutionalized racism. These acts of injustice and attempts at reform have inspired organizations across the country to declare their support for Black Lives Matter and commit themselves to justice and equity. Civil rights organizations like the NAACP[1] and nonprofits like the Marshall Project[2] have ramped up their review of policy solutions to promote racial equity and justice. In June of 2020, the House of Representatives passed sweeping police reforms through the Justice in Policing Act of 2020, voting to ban no-knock warrants in drug-related cases, ban chokeholds, and reduce the legal standards necessary to pursue criminal and civil penalties for police misconduct.[3]

Most recently, President-elect Joe Biden has identified racial equity as one of four top priorities for his incoming administration. In addition to working to increase economic opportunity for Black and Brown Americans, the Biden-Harris administration has recognized the need for police reform. The administration's transition website states its commitment to work for legislation to establish "a nationwide ban on chokeholds; stopping the transfer of weapons of war to police forces; improving oversight and accountability, to create a model use of force standard; [and] creating a national police oversight commission."[4]

Oversight, accountability, and transparency are central to proposals for police reform - and those goals depend on releasing complete, accurate, and unbiased data about criminal justice. The **Center for Open Data Enterprise** (CODE), a Washington-based nonprofit that promotes the use of open data and shared data for the public good, has produced this Briefing Paper to assess the data we have and identify the data we need. Beyond police reform, CODE believes that historical and current data can be a critical tool to advance the cause of racial equity by mapping the status of different issues, providing use cases for data analysis, and identifying challenges to be addressed. As Rashida Richardson, the Director of Policy Research at the AI Now Institute, has noted: "technology has the potential to serve as an intervention for flawed narratives that have prevailed as a result of historical memory by demonstrating the realities present in historical and current data."[5]

This *Briefing Paper on Policing Data* is the first in a series of five papers on Open Data for Racial Equity that CODE plans to produce. The full series of Briefing Papers will cover the following topics:

- **Policing and Criminal Justice.** Policing data provides some of the most important sources to measure the detrimental impacts of bias-based law enforcement on African Americans, and how potential policy reforms may impact police departments and reduce police violence. This paper identifies key civil and state-level sources of policing data, outlines the policy landscape, and provides recommendations to improve and apply criminal justice data. CODE has chosen to make this paper the first in the series because there is an urgent need for data to inform new criminal justice reform policies

and provide insight on police involvement in marginalized communities. Despite some advances in open data for policing, policing data currently remains sparse and inconsistent around the United States.

- **Environmental Justice.** Communities of color face environmental dangers ranging from sea-level rise to air pollution in urban areas. Achieving environmental justice is a major component of securing racial equity. CODE will assess the state of environmental open data, identify datasets that reveal the impact of climate change on African American communities, and recommend data-driven solutions.
- **Fair Housing.** African Americans have long faced challenges in accessing affordable and desirable housing due to redlining and other discriminatory practices.[6] Understanding and applying the range of open data that relates to housing practices is a critical component to ensuring that these communities can live in thriving neighborhoods.
- **Healthcare Access.** Historically substandard healthcare access and poor healthcare delivery have negatively impacted health status for many African Americans. This difficulty in accessing care has contributed to higher levels of COVID-19 and other major diseases among African American communities. CODE has begun work with the U.S. Department of Health and Human Services on data-driven approaches to improve healthcare access, and will build on that work in this Briefing Paper.
- **Economic and Workforce Opportunity.** Economic stability and access to good jobs are keys to reducing racial disparities in economic status. Building on previous work with the U.S. Department of Labor and other stakeholders, CODE will explore available workforce data and suggest ways to better leverage the data to improve economic conditions for African Americans nationwide.

CODE hopes that these Open Data Briefing Papers will illuminate the landscape of open data and serve as tools for stakeholder engagement, policy development, and action. CODE also hopes to use these Briefing Papers to support Open Data Roundtables for Racial Equity, applying the approach that CODE has used for Roundtables on health data sharing, data privacy, and other issues.[7] By combining these Briefing Papers with Roundtables, CODE hopes to develop in-depth analyses of key data types and databases, government and non-government data sources, use cases for data application, data use challenges, and the policy landscape. CODE plans to partner with organizations working for racial equity to develop this program and welcomes inquiries about potential collaboration.

WHY FOCUS ON POLICING DATA?

CODE has focused this Briefing Paper on policing data because there is an urgent need for such data to inform new criminal justice reform policies and provide insight on police involvement in marginalized communities. As states grapple with new approaches to reform their police departments and advance racial justice, open data repositories and resources are proving their value. Groups like Campaign Zero[8] and the Mapping Police Violence Project[9] have compiled important datasets on law enforcement activity and police reform. Despite these efforts, however, policing data currently remains sparse and inconsistent around the United States. This paper explores the potential for improving and using open data to reduce police violence, especially in communities of color, and implement police reforms.

In addition to outright violence, criminal profiling and bias-based policing contribute to large disparities in incarceration rates. The U.S. criminal justice system is the largest in the world and a leader in incarceration rates at 698 per 100,000 residents, dwarfing the rate of other developed nations.[10] At the end of 2015, 2.2 million Americans were incarcerated in federal, state, or local prisons and jails.[11] African Americans are more likely than white Americans to be arrested, convicted, and experience lengthy prison sentences. Specifically, Black adults are 5.9 times as likely to be incarcerated as whites, and as of 2001, one of three African American boys were likely to experience a prison sentence in their lifetime.[12] Hispanics are also 3.1 times more likely to be incarcerated than their white counterparts.[13] The deep structural, systemic, and institutional problems that cause these major racial disparities in criminal justice often go beyond explicit racial discrimination. These structural problems start with increased police presence in Black communities and the prevalence of bias in the criminal justice system.[14] Bias-based policing occurs when law enforcement personnel make decisions or take action based on their personal and/or societally biased stereotypes, rather than relying on observed behaviors and facts.[15] Officers may rely on these preconceived notions when determining whether to believe that an individual has been, is currently, or is about to be involved in criminal activity. While bias-based policing and profiling are illegal, research routinely indicates that discrimination is pervasive across the criminal justice sector, especially in policing.[16]

While a range of issues affect racial disparities in criminal justice, policing is often the first interaction that many communities of color have with the justice system and can mark the entryway into the court and prison systems. Moreover, police officers are routinely dispatched to 911 calls, even though a significant number of them are non-urgent, low-priority, quality-of-life incidents that do not require an emergency police response. Police may escalate the problem when they respond to incidents with individuals experiencing homelessness, mental health crises, or challenges in the education system. Those systems often have opaque data, and that lack of transparency can be a hurdle for reform.

For all these reasons, CODE believes that improving policing data is a top priority for improving the criminal justice system. This data can be used to improve accountability, build trust in the system, and act as a starting point for better reform.

THE STATE OF POLICING OPEN DATA

Although racial inequalities in policing can be measured through data, available policing open data is often inconsistent and decentralized. The Vera Institute's Arrest Trends report points out that of the 22,645 police agencies on record in 2016, 32% reported none of their arrest data to the FBI, 9% reported some of their data, and only 59% reported all of their data.[17] Moreover, there is no centralized database that reports all of the available law enforcement open data portals or all of the data they publish. For the purposes of this Briefing Paper, CODE has identified three different types of open databases: civil society databases (composed of journalist efforts and NGOs gathering available data), national-level efforts, and state and local data collection efforts. Based on this review, the most comprehensive national datasets tend to be the civil society initiatives that collect and share their own data.

What Types of Policing Open Data Exist Currently?

The Police Data Initiative records datasets that have been published by nearly 130 law enforcement agencies around the United States.[18] The following datasets are selected police-related datasets from the Police Data Initiative.

- **Calls for service:** Calls for service to law enforcement agencies generally include calls to "911" for emergency assistance and may also include calls to non-emergency numbers. There are 34 open datasets available at the local police department level.[19]
- **Police complaints:** Citizen-driven complaints and "internal affairs" investigations into officer misconduct. There are 7 available open datasets on complaints, nuisance complaints, and complaint allegations with findings at the local police department level.
- **Officer-involved shootings:** Data on discharges of firearms, which may include accidental and intentional discharges by a police officer whether on or off duty. There are 31 available open datasets at the local police department level.
- **Stops, citations, and arrests:** This data can include an array of information, from standard traffic stops to Terry stops.[i] There are 46 available open datasets at the local police department level. Other organizations like the Vera Institute have meticulously documented arrest data and recorded racial disparities in arrest trends.
- **Use of force:** The FBI defines the Use of Force as an action taken by a police officer that can result in the death or serious bodily injury of a person, as well as when a law enforcement officer discharges a firearm at or in the direction of a person. There are 18 available open datasets at the local police department level.

[i] A Terry Stop is a stop that authorizes police to stop and potentially detain someone based on suspicions that the person has been involved in an illegal activity. It is based on the 1968 Supreme Court case *Terry v. Ohio*, in which the Court authorized police to conduct these stops based on reasonable suspicions.

- **Incidents:** These are records collated by a police department for management and may include crimes or reports filed by officers related to a specific incident. There are 40 available open datasets at the local police department level.
- **Hate/Bias crimes:** This data are criminal offenses that are motivated to some extent by the offender's bias. There are 23 available open datasets at the local police department level.
- **Demographics:** This data consists of the diversity and representation found in police forces across the country, which may include gender, race, ethnicity, and other information. There are 15 available open datasets at the local police department level.

Connecting the Dots: Data Sharing Between the Federal and Local Levels

Data sharing efforts between law enforcement agencies and all levels of government have improved in order to detect, prevent, and respond to acts of terrorism. Since 9/11, Federal, state, local, and tribal law enforcement agencies have demonstrated a greater willingness to work collaboratively and share information, including criminal history records, law enforcement incident reports, records of judicial actions and decisions, and watchlists of known and suspected terrorists.[20] Although this information-sharing exchange was developed for the purpose of sharing terrorism-related information, the processes used are also applicable in the analysis, detection, and prevention of other sorts of criminal activity.

An important aspect to this multi-level data-sharing is the use of information systems that capture and store up-to-date information in a timely and secure manner, such as FBI watchlists. The law enforcement information sharing program, Logical Entity eXchange Specifications[21] (LEXS), a subset of the National Information Exchange Model[22] (NIEM) translates information into a standard and common format, enabling users to share and retrieve data from multiple sources all on one platform.

The federal data landscape in the United States is primarily focused on crime rather than policing data. This crime data has historically been estimated by the Uniform Crime Reporting (UCR) system, which is focused on a narrow set of offenses rather than a broad spectrum of crimes, which may require different measurement and assessment.[95] The FBI Criminal Justice Information Services (CJIS) division shares criminal justice information with over a million users in 18,000 different organizations across law enforcement, national security, and intelligence community partners.[23] CJIS holds the Uniform Crime Reporting (UCR) program, National Instant Criminal Background Check System (NICS), fingerprints and other biometrics data, gun purchase background checks, the National Crime Information Center (NCIC), the National Data Exchange (N-DEx), and a number of other criminal justice data sources.

For more localized data sharing between governments and law enforcement agencies, the Department of Justice (DOJ) sponsors Regional Information Sharing Systems (RISS) to support nationwide law enforcement in combatting illegal drug trafficking, identity theft, human trafficking, violent crime, terrorist activity, and to promote officer safety.[24] RISS is composed of 6

multi state regional centers, all of which offer tailored support services for the investigation and prosecution needs of regional agencies. RISS Secure Cloud (RISSNET), operated by RISS, supports bidirectional data sharing across all levels of law enforcement nationwide. The system holds over 44.2 million records from more than 80 systems and supports hundreds of information sources.

Federal Data Sources

The Bureau of Justice Statistics (BJS), authorized under the Justice System Improvement Act of 1979, is one of the largest federal collectors of data related to criminal justice.[25] The BJS' mission is to "collect, analyze, publish, and disseminate information on crime, criminal offenders, victims of crime, and the operation of justice systems at all levels of government." The BJS annually publishes statistics on criminal victimization, populations under correctional supervision, and federal criminal offenders and case processing. The BJS also coordinates its activities with other federal entities including the U.S. Census Bureau.

In addition to the Bureau of Justice Statistics, the Federal Bureau of Investigation (FBI) publishes its Crime Data Explorer (CDE).[26] This database represents a profound transformation in how data from the FBI's Uniform Crime Reporting (UCR) program is presented.[27] The UCR provides incident-based data by state, summary data with estimates, and data on specific topics like assaults on law enforcement officers, hate crimes, or human trafficking. In addition to this database, the National Use-of-force Data Collection features use-of-force data (i.e. incident info, subject info, officer info) which is voluntarily submitted to the FBI by participating law enforcement agencies.[28] The 2019 Participation report can also be found on CDE, which documents the specific law enforcement agencies that currently collect these datasets.[29]

The National Incident Based Reporting System (NIBRS) tool, developed in the late 1980s, is an incident-based reporting system in which agencies collect detailed data on each single crime occurrence, including information on victims, known offenders, relationships between victims and offenders, arrestees, and property involved crimes.[30] NIBRS collects data within 22 offense categories, made up of 46 specific crimes called Group A offenses, making the system more informative than the UCR. To make use of this advanced system, the FBI will be transitioning the UCR Program to a NIBRS-only data collection by 2021. The widespread implementation of the reporting system is meant to make NIBRS the law enforcement community's new standard for quantifying crime, helping agencies and communities nationwide use resources more strategically and effectively.[31]

National Civil Society Databases

Given that data on policing at the federal level is not comprehensive, a number of civil society initiatives have sprung up to fill the gap. The following programs provide data that is gathered by civil society groups, community-based organizations, and investigative journalism.

- **Campaign Zero:**[32] Provides a comprehensive platform of research-based policy solutions to reduce police violence in America. The site provides statistics on police killings, including prevalence of police violence in other countries, unarmed victims, and causes of police intervention.

- **Police Use of Force Project:**[33] Provides data on how police use of force policies can help to end police violence. The project reviewed use of force policies in America's 100 largest city police departments and police killings data from The Guardian's The Counted database, from January 1, 2015 - July 15, 2016, to determine whether these lethal actions were related to the departments' policies, or lack of policies, restricting use of force, as well as a number of other factors.[34] These included the number of arrests made by the department, size of the police force, racial demographics of each city, number of assaults on officers, and the median income and level of inequality in each city.
- **The Sentencing Project:**[35] This project compiles state-level criminal justice data such as imprisonment by gender/race/ethnicity. It publishes issues about racial disparity, sentencing policy, juvenile justice, and other statistics.
- **Police Data Initiative:**[36] The site provides open and soon-to-be-opened data sets that more than 130 local law enforcement agencies have identified as important to their communities.
- **Police Contract Database:**[37] This database makes it possible to access police union contracts and other documents related to police accountability for the 100 largest U.S. cities.
- **Police Body Camera Implementation by City:**[38] Provided by Campaign Zero, this data includes the number of sworn officers per city, and the corresponding number of those officers wearing body cameras.
- **Gun Violence Archive (GVA):**[39] An online archive of gun violence incidents collected from over 7,500 law enforcement, media, government and commercial sources daily. The Archive provides data on incident characteristics (e.g. officer involved shooting, shot), guns involved, participant demographics (e.g. age, gender, status) on a city/county level.
- **Mapping Police Violence:**[40] The database represents all instances of individuals killed by police in the US since 2013. The information is based on extensive original research and sourced from crowdsourced databases such as FatalEncounters.org, the U.S. Police Shootings Database and KilledbyPolice.net.
- **The Washington Post's "Fatal Force" Project:**[41] The database shows records of every fatal shooting in the US by a police officer in the line of duty since Jan. 1, 2015.
- **The Stanford Open Policing Project:**[42] Provides standardized policing data on vehicle and pedestrian stops from law enforcement departments across the US to enable statistical analysis.
- **Racial Data Lab at the Center for Antiracist Research:**[43] The Center for Antiracist Research at Boston University publishes racial data across a variety of categories and has focused primarily on published data related to the impact of COVID-19 on Black and Latino communities.

CASE STUDY: THE NATIONAL JUSTICE DATABASE[44]

The Center for Policing Equity's (CPE) justice database integrates crime data, demographics information from the U.S. Census and American Community Survey, and police behavioral data, providing a unique analytic opportunity to determine what portion of racial disparities results from police behavior. The National Justice Database also integrates the psychological surveys of officers and residents to better understand implicit bias, job stress, and other factors in policing. The CPE uses this data to work closely with police departments to implement data-driven interventions and trainings. The CPE produces analyses that identify and reduce the causes of racial disparities in law enforcement by using data and evidence-based approaches. In addition, the Center recently analyzed sociodemographic and COVID-19 data and found that Black and brown Americans will contract and die from Covid-19 at much higher rates than their white peers.

State and Local Data Collection Efforts

Since policing is conducted at a local and state level, civil society groups and local governments are in the best position to capture highly detailed, granular information about policing. State and city level crime data is being collected and aggregated into platforms for public use, including both city portals and national resources such as data.gov.[45] City-level data is often the most detailed data available to policymakers and citizens, and provides useful time series data on crime and other indicators. The table below includes a variety of city-based data collection systems for police departments and the types of data they collect.

CITY	STATE	WEBSITE	DATA DESCRIPTION
Anchorage	AK	https://data.muni.org/Public-Safety/Anchorage-Crime-Data-by-Type-and-Year-UCR-1985-201/48we-a359	City crime data (1985-2015)
Austin	TX	https://data.austintexas.gov/browse?category=Public+Safety	Offender datasets, racial profiling dataset (2015), 911 calls for service
Baltimore	MD	https://data.austintexas.gov/browse?category=Public+Safety	Victim based crime data, complaints cases, racial profiling

CITY	STATE	WEBSITE	DATA DESCRIPTION
Chicago	IL	https://data.cityofchicago.org/browse?category=Public%20Safety	City crime data, sex offenders, complaints received by the Civilian Office of Police Accountability
Durham	NC	**https://catalog.data.gov/dataset/arrests-by-the-durham-pd-2009-2012-blacks https://catalog.data.gov/dataset/police-enforcement-action-taken-by-drivers-sex-race-and-ethnicity**	Police enforcement action taken by driver's sex, race, and ethnicity, arrests by the Durham PD 2009-2012 Blacks
Honolulu	HI	https://data.honolulu.gov/Public-Safety/Crime-Incidents/a96q-gyhq	Crime incidents through 2016
Kansas City	MO	https://data.kcmo.org/Crime/KCPD-Crime-Data-2020/vsgj-uufz	City crime data 2020
Los Angeles	CA	https://data.lacity.org/A-Safe-City/Arrest-Data-from-2010-to-2019/yru6-6re4	Crime and arrest data
Louisville	KY	https://data.louisvilleky.gov/search?query=crime	Crime data and reports, Officer Involved Shooting (OIS) Database, hate crimes, cold case/robbery, sexual offenders
Miami	FL	https://gis-mdc.opendata.arcgis.com/	City crime data, sex offender, demographics

CASE STUDY: OPEN CRIMINAL JUSTICE DATA IN ACTION

To better understand local criminal justice data and mobilize changes in police practices across Los Angeles neighborhoods, the University of Southern California launched a new neighborhood crime data initiative in collaboration with the Microsoft Criminal Justice Reform team and Urban Institute's National Neighborhood Indicators Partnership (NNIP).[46] These institutes collected multiple LAPD data sources from the Los Angeles Open Data Portal, including calls for service, arrests, stops and crimes, and visualized them using mapping tools.[47] By integrating the key crime indicators into the Neighborhood Data for Social Change (NDSC) platform, the

project allows the public to download and analyze crime data from the public safety section, and better view the intersection of neighborhood crime with other public policy fields, such as health, education and housing.[48]

Neighborhood-level crime data sheds light on "police-community" activities as part of a citywide crime analysis.[49] By clustering similar reporting districts into groups, the project shows policing trends and identifies geographical relationships. For example, analysis of this data shows that neighborhoods with high rates of police activity also tend to have wider racial disparities in stops and arrests, and more economic hardship. The availability of such open criminal justice data makes police activity more visible, and makes it possible for the groups affected to advocate for change.

Civil Society Datasets at the Local Level

In addition to the locally available data sources on policing, some civil society groups are also making efforts to collect datasets at the local level. Two leading examples are:

- **California Police Scorecard Project:**[50] Utilizes data on policing-related issues to evaluate how each police department interacts with, and the extent to which officers are held accountable to, the communities they serve. Calculates each agency's Police Violence Score and Police Accountability Score by factoring racial disparities in arrests and the use of deadly force.
- **ProPublica's Civilian Complaint Board Dataset:**[51] The repeal of section 50-a in New York City, which permitted law enforcement to shield police misconduct records from the public, has allowed ProPublica to file a Freedom of Information Act request to secure the personnel files of any police officer who had a complaint lodged against them.[52] The dataset includes 12,000 complaints filed against police officers from 1985 to 2020.

CASE STUDY: FILLING THE POLICE DATA GAP IN CHICAGO

With a crime rate of 43 per 1,000 residents, Chicago has one of the highest crime rates in the country. According to NeighborhoodScout's analysis[53] of FBI-reported crime data, the chance of becoming a victim of violent crimes, including murder, rape, and armed robbery, is 1 in 99. However, many citizens feel abused by the police force. To reveal the patterns in the complaints accumulated at the Chicago Police

Department (CPD), the city has released more than 100,000 complaint records since July 2016. Civil society groups are also making efforts to fill the police data gap by making data accessible and visualizable to the public.

A major source of information about Chicago police officers who have been named in misconduct complaints or disciplined is the Citizens Police Data Project, sponsored by the Invisible Institute.[54] The database includes information about police misconduct in Chicago, visualizations of categories of disciplinary actions and complaints, and analyses of the race, gender, and age of officers. The data shows that only 2.1% of the total complaints have been sustained when looking at the investigatory results. This probability drops radically if the complainant is a person of color who resides in the south and west of the city.

Based on Invisible Institute's further research, since the complaints list multiple officers, it's possible to build and visualize a social network of police interactions by analyzing the names of officers across complaints and the links between them.[55] The organization uses data on lawsuits involving police officers gathered by the Chicago Reporter to demonstrate that police violence and individual bias are contagious.[56]

DATA USES AND USE CASES

A growing number of communities and police departments are using data to improve their policing and procedures. Both crime and arrest rates are decreasing in areas that practice data-driven policing. CODE has identified four relevant use cases that involve predictive policing, implicit bias training, evaluation of police department policies, and alternatives to policing.

DATA FOR PREDICTIVE POLICING

Police departments across the United States use predictive policing to help decide where to deploy police or identify individuals who are more likely to commit crimes by analyzing large sets of data. The most commonly used method, place-based predictive policing, uses existing data on crime to identify specific areas and times a crime is likely to take place, while person-based predictive policing is used to identify particular people or groups that are most likely to commit or be victim to a crime.[57]

Police departments use three categories of analysis techniques in order to predict crime: analysis of space, analysis of time and space, and analysis of social networks.[58] Many victims of crime are likely to be targeted a second time so most basic predictive models use incident variables such as offense type, time, and day of the week committed to predict potential locations of future crimes. Police departments are now incorporating spatial variables (i.e. indicators or areas with potential victims, indicators of escape routes), temporal variables (i.e. payday schedules, weather disasters, entertainment events), and social network variables (i.e. kinship, affiliation with an organization, financial transactions) into their processes to predict where and by whom crime is likely to occur.[59]

The use of predictive analytics has become controversial, due to a lack of standards and transparency around these computer algorithms and the possibility of reinforcing racial biases through these methods. There is also a general concern that the underlying crime reports that police departments are using in their forecasting models may not accurately reflect the prevalence of crime in an area. The New York Police Department (NYPD) created its own predictive policing algorithm for seven specific crime categories, and uses it to help assign officers to monitor specific areas of interest. Despite seeing record low levels of crime since the 1950s, the department has come under scrutiny for lack of transparency and refusal to disclose the datasets they use for their algorithms.

DATA FOR MEASURING BIAS IN POLICING

The Center for Policing Equity (CPE) conducts data-driven research to simultaneously help police departments realize their equity goals and advance the scientific understanding of issues of equity within organizations and policing.[60] In a 2016 study for the Austin Police Department, the CPE and Urban Institute studied traffic stop, search, and use of force data and successfully isolated race and ethnicity data to understand the impact on minority communities.[61] Although the study found that searches were often used effectively by the department, use of force and traffic stops

demonstrated implicit bias. The report was submitted to the Austin Police Department to improve on its existing policies around more careful review of citizen complaints, standardizing body camera use, and sharing its data with the public.

DATA FOR EVALUATING USE OF FORCE POLICIES

In a 2016 independent study by Campaign Zero's Samuel Sinyangwe, "Examining the Role of Use of Force Policies in Ending Police Violence," experts reviewed the use of force guidelines of the nation's largest police departments to determine where these policies were currently in place and whether they were associated with fewer police-involved killings.[62] The authors found that reforming and updating the use of force procedures resulted in lower rates of police-involved killings, with substantially fewer police-involved killings among departments that have more of these policies in place. This study drew some of its evidence from The Guardian's "The Counted" database, which compiled statistics on officer-involved shootings from 2015 to 2016.

DATA FOR ALTERNATIVES TO POLICING

Organizations such as the Law Enforcement Action Partnership (LEAP) and Center for American Progress (CAP) suggest developing an alternative system for first responders known as "Community Responders." Community responders would be made up of individuals qualified to manage different low-risk, low-priority situations, that are known to turn into violent confrontations when police become involved. LEAP and CAP analyzed 911 calls from cities around the US and found that between 33 and 68 percent of police calls for service could be handled without sending an armed officer to the scene.[63] A number of U.S. cities have already created and implemented their own successful non-police community responder models, including Eugene, Oregon's Crisis Assistance Helping Out On The Streets (CAHOOTS) program.[64] Utilizing non-police interventions for low-risk situations would improve outcomes for disproportionately policed communities, and reduce the ineffective use of resources as an incentive to police departments.

There is an increasing need to collect better data on the work of non-policing agencies in responding to calls for service as communities attempt to reduce the police response to non-threatening calls. Police are currently responsible for responding to all crimes and calls-of service, which creates the risk of escalating non-threatening situations into violent confrontations. Some local and state police departments have switched to telephone reporting for crimes, and consequently, respond to just a third of all calls. Fewer in-person responses from police will decrease the likelihood of violent confrontations between police and the citizenry.

A number of communities have launched pilot programs to place the responsibility of responding to non-urgent/violent matters in the hands of experts who are better equipped to deal with such incidents than the police are. In Eugene, Oregon, for example, the city developed a model for alternative emergency response, known as Crisis Assistance Helping Out on the Streets (CAHOOTS). Dispatchers are trained to divert calls for assistance that involve behavioral health or substance abuse to trained professionals at White Bird Clinic, who consequently send out a single crisis worker and van to assess each incident. Many cities are starting to use the CAHOOTS model as inspiration for their own local alternative response models, including Oakland, California.

The city funded a $40,000 feasibility study to examine the potential of a program known as the Mobile Assistance Community Responders of Oakland (MACRO), and invited representatives from CAHOOT to help with its establishment. As a result, the city council allocated $1.5 million for the launch of an official pilot program in 2020. The goal of the program is to partner with relevant local nonprofits to do referrals for health and homelessness services, and will be housed under the city's Department of Violence Prevention.

As more cities develop programs like these, there is an urgent need to collect better, standardized data on how incidents are handled by both police and non-police personnel. The UCR and NIBRS systems have been designed to define reporting elements about the events to which police respond, not about the nature of the response itself. Beyond the limited FBI program for reporting use of force, there are no real standards to fully describe the actions of police as they carry out their assigned duties. With more non-policing agencies responding to calls for service, better response data is needed to compare police and non-police responses and assess how these new approaches are working.

CHALLENGES AND CROSS-CUTTING ISSUES

CODE's review of the police data landscape has identified a number of issues with current data sources, data management, and data utilization for policing data.

- **Difficulties in measuring crime:** There is no current consensus about how to define crimes or criminals. In some cases only offenses worthy of incarceration are considered crimes.[65] In others, fined infractions also count; for example, speeding is categorized as a crime in Los Angeles. The lack of clear definitions has led to stark differences between the FBI's Uniform Crime Reporting program (UCR), which draws its data from law-enforcement agencies, and the Bureau of Justice Statistics' National Crime Victimization Survey (NCVS), which relies on victim interviews. Victimization studies also do not take place at the sub-state level, making this data non comparable. This may change with the FBI's move towards NIBRS, which will institute stronger data quality, adopt common standards, and better classify crime. A 2018 report from the National Academies of Science, Engineering, and Medicine noted that crime measurement should expand to include more data, including data on the geographic, demographic, sociological, and economic context of each crime.[96]

- **Measuring police response:** Police officers are routinely dispatched to all 911 calls, whether or not they merit an armed police response. While there is increasing interest in crisis intervention teams and community responders as an alternative to police intervention, the data for these programs has not been widely shared. Data on tactics used, overall efficiency, and best practices from existing community responder programs should be collected and analyzed to inform the widespread development of these programs. Leveraging this data could help create alternative policing interventions to enable police departments to better allocate their resources, and in turn, focus their efforts on other much needed departmental changes.

- **Unclear metrics and indicators:** It is hard to identify the most valuable indicators to assess levels and risks in criminal justice. Generic statistics, such as crime count, violent crime, and crime rate are not specific enough to give a clear picture. When assessing the crime risk, Liberty Vittert, a statistician at Washington University in St Louis, has proposed that "weights" be applied to crime reports.[66] In this system, a murder, for example, would be given a much greater weight than stealing from the Dollar Store, and metrics of crime levels would take that weighting into account.

- **Lack of data standards:** Data is collected and recorded in different ways by the thousands of police departments and sheriffs' offices across the country. Indicators and data formats vary across cities, states, and geographical regions. The FBI has launched

a police use-of-force initiative to collect incident statistics nationwide in a standardized format.[67] However, local law enforcement agencies are not required to submit data for the initiative but are only encouraged to submit data voluntarily.

- **Disconnected data recording systems:** Most police departments have two separate computer systems.[68] One system dispatches officers to potential crime scenes based on 911 calls, while the other is used for records management to store arrest reports and final 911 dispatches. Typically these are two different, totally separate systems, sometimes purchased from two different vendors. The records management system relies on arrest data, which can vary widely by jurisdiction.
- **Vendor lock-in risk:** Police departments under budgetary pressure may be reluctant to upgrade systems or change vendors for their data systems. If they rely too heavily on specific vendors, there is a risk that the vendors may lock the crime data in their own systems, raising issues of data security and data privacy.
- **Voluntary nature of state and local reporting systems:** Many state and local police departments are not mandated to report crime statistics to systems like the Uniform Crime Reporting System or the future NIBRS.

ONGOING POLICY REFORMS

Several policy reforms have been implemented in recent years to improve data on criminal justice. The first attempt to standardize data on policing came through the 1994 Violent Crime and Law Enforcement Act, which mandated that the Attorney General "acquire data about the excessive use of force by law enforcement officers."[69] Despite this reform, two years later the Justice Department reported that systematically collecting information on the use of force was difficult across the 17,000 law enforcement agencies due to a lack of uniform standards and the sensitivity of the data.[70]

Nearly two decades later, the police shooting of Michael Brown in Ferguson, Missouri led to two major reforms. First, President Obama issued an Executive Order in December 2014 creating the 21st Century Policing Task Force, which aimed to identify a slate of policy changes that would broadly enhance trust between police departments and local communities.[71] The final report produced by the Task Force recommended that in order to support policy and oversight, all use of force policies "should also include provisions for the collection of demographic data on all parties involved. All policies and aggregate data should be made publicly available to ensure transparency."[72]

Second, Representative Robert Scott introduced the "Death in Custody Reporting Act of 2013" (DCRA) which became law on December 18, 2014 and compels states and federal agencies to report fatalities on a quarterly basis of people they had sought to arrest or detain.[73] The law built on the Death in Custody Reporting Act of 2000, which had sought to collect data about the deaths of prisoners in custody and introduce monetary penalties for noncompliance. The 2013 Act broadened the focus to include individuals who had been arrested or detained and were en route to being incarcerated. In 2016, the Department of Justice moved to create a national database of officer-involved shootings and deaths in custody to comply with the DCRA.

Outside of specific policing-related data collection programs, the Department of Justice released its Open Government Plan 4.0 in 2014 in response to the 2009 Memorandum on Transparency and Open Government. This Plan includes details about improving its open data through improved data customization and metadata tags.[74] In addition, the Department released its roadmap to implement the Federal Data Strategy in early 2019. This roadmap for data collection emphasizes the need to expand its data catalog of key data assets, many of which are found held by the Bureau of Justice Statistics.[75]

The current demand for police reform has increased legislative momentum for improved open data sources and transparency in policing. Most prominently, the entire House Democratic Caucus, led by members of the Congressional Black Caucus introduced the Justice in Policing Act of 2020 in the House of Representatives.[76] This Act proposes the establishment of a National Police Misconduct Registry. The Registry would include a variety of data points such as the complaint filed, discipline records, termination records, records of lawsuits, and instances where a police officer retires pending an investigation. This Act is also supplemented by the Police

Reporting Information, Data, and Evidence Act of 2020 or the PRIDE Act of 2020 which seeks to better define use of force reporting both in the case that law enforcement shoots a civilian or in cases when a civilian shoots a law enforcement officer.

Campaign Zero, now referred to as 8 Can't Wait,[77] has developed a recommended set of data-driven policy solutions,[78] including the end of "broken windows"[ii] policing, introduction of community oversight, limiting the use of force, independent investigations and prosecutions, and training and body cameras to reduce bad behavior. In its 2016 Police Use of Force Policy Analysis, the group noted that those police departments that had implemented use of force policies had substantially fewer killings than their counterparts that had not.[79] Police abolition groups, such as 8 to Abolition,[80] have flagged issues in 8 Can't Wait's data and also argue for more fundamental reforms such as community-based violence reduction and transformative justice policies.

[ii] The Broken Windows model of policing, as described by the Center for Evidence-based Crime Policy, was first described in 1982 in a seminal article by Wilson and Kelling. The model focuses on the importance of disorder (e.g., broken windows) in generating and sustaining more serious crime. Disorder is not directly linked to serious crime; instead, disorder leads to increased fear and withdrawal from residents, which then allows more serious crime to move in because of decreased levels of informal social control.

IMMEDIATE OPPORTUNITIES TO IMPROVE POLICE DATA

While some improvements to criminal justice data will require long-term reform, there are immediate opportunities to improve existing police databases and deepen our understanding of how Black and minority communities are policed. The National Police Foundation has developed a five-part compendium of best practices on Open Data and Policing, including the following five guides.[81]

BEST PRACTICE FOR:	DESCRIPTION
Developing Open Datasets[82]	This guide outlines key points for law enforcement agencies to consider in developing their open datasets for public release, including data availability, agency capacity, and strategies for community engagement.
Practices for Opening Data[83]	This guide explores steps agencies can take as they begin to release open data or to enhance their current open data practices, including establishing data governance, developing data inventories, and creating roles and responsibilities.
Sharing Open Data[84]	This guide outlines key points for agencies to consider in developing their datasets for public release, including the creation of an open data portal, key objectives, and local connections for distribution.
Updating Open Data[85]	This guide discusses the value of updating open data and methods for data updates in the maintenance of open data, including measuring the frequency of updates and communicating these updates with the public.
Building Community Partnerships[86]	This guide explores the role of community engagement in open data and ways to build on these police-community partnerships, including strategies to partner with local government, provide supporting materials for data consumption, and offer public forums to understand data needs.

Existing sources of police datasets should all be made available as well. A Boston Globe opinion piece identified five major datasets that should be made readily available to the public and corresponding research questions.[87] One priority is the release of use of force data, including shootings by officers. Researchers could evaluate use of force incidents to assess whether

force was justified and also understand the role of race in these incidents. The Seattle Police Department's[88] use of force data is updated automatically in near real-time, and Orlando's[89] officer-involved shooting data includes detailed review letters from the State Attorney for each incident.

Datasets on complaints against officers should be made available as well. This data would inform what complaints people are filing against police officers, and how those complaints are being resolved.

- The Citizen Complaint Authority in Cincinnati helps the public understand this data in graphs, charts, and maps, making it easier to devise better policies.[90]
- Police force demographics, another important factor, can indicate if a police force looks like the community it serves or is failing to retain women and people of color. Wallkill, N.Y. publishes an annual spreadsheet that details rank, years on the force, gender, and education levels of the 120 people in their department.[91]
- Existing data on "stop-and-frisk" demographics and traffic stop statistics to determine bias in police action should also be made available to the public. The Boston Police Department's newly liberated data includes the names of the officers making the stops and their supervisors.[92]
- The San Diego Police Department,[93] in accordance with the California Racial and Identity Profiling Act of 2015,[94] releases demographic details on the people stopped, as well as reasons for the stops and any actions taken by the officers.

QUESTIONS FOR FUTURE PROGRESS

There are a number of issues to be addressed if we are to improve the ecosystem of open policing data and utilize this data for better policy analysis. CODE proposes the following questions as a starting point, in the hope that they will help spark a national discussion and new strategies for criminal justice data and its application. We also hope to explore these questions and develop action-focused next steps at a future Open Data Roundtable.

- What kinds of federal oversight are needed to create better standards and data sharing for police departments?
- What kinds of nationally available criminal justice and policing data would improve police accountability and substantive criminal justice reform?
- How can data better help policymakers and researchers understand the disproportionate use of violence by police against Black and Brown communities?
- What forms of data could potentially inform improved policing practices and criminal justice procedures for minority communities?
- How do we measure and evaluate police departments based on open data? What local use cases provide hopeful models for police reform?
- What kinds of standardized data will help assess programs to handle more service calls through non-policing agencies?
- How can datasets and algorithms be better utilized to improve or change predictive policing?

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The Center for Open Data Enterprise (CODE) is an independent nonprofit organization based in Washington, D.C. CODE's mission is to maximize the value of open and shared data for the public good, by working with government agencies, businesses, nonprofits, and researchers who are both data providers and data users. Since it was founded in January 2015, CODE has held more than two dozen Roundtables and Workshops with the White House, federal agencies, and international governments and organizations focusing on topics including health care, climate and the environment, and workforce development. CODE has also developed informational materials and recommendations to promote the use of government data and public-private collaboration. For more information, please visit www.odenterprise.org.

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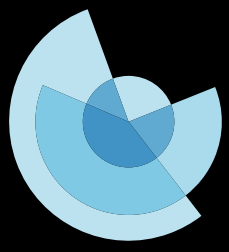

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