Police Force Analysis System℠
First Summary Report
Dallas Police Department

March 2023

Police Strategies LLC

www.policestrategies.com

This study was funded by the Dallas Police Department. This research was conducted independently, and the findings and recommendations presented within this report are from the authors and do not necessarily reflect the official positions or opinions of the Dallas Police Department. Please direct questions regarding this report to Bob Scales at: bob@policestrategies.com

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Background – The Lack of Data on Police Uses of Force

In response to a recent series of highly publicized police shootings, the public and policy makers are demanding that law enforcement be more accountable and transparent about its use of force, particularly with regards to the impact on communities of color. But, as made clear in a 2013 survey by the U.S. Department of Justice,[1] there is wide variance in agency approaches to tracking force, a lack of in-depth review of force within many individual police departments, and simply no data allowing for a meaningful evaluation and comparison of use of force practices across the United States. Understanding police use of force in all its complexity requires a systematic examination of when, where, how, and why force is used in the approximately 400,000 police use of force incidents occurring each year throughout the country.

While the FBI has attempted to collect information on justifiable homicides by police officers, this amounts to an extremely small percentage of all police uses of force that occur each year and the data is limited and incomplete. In 2015 the FBI launched a new effort to collect national use of force data.[2] In 2022 the FBI released some of the data collected under the program.[3] Unfortunately, due to low participation rates from law enforcement agencies, the data release has limited value. The US Government Accountability Office has provided some recommendations for improving publication of use of force data.[4]

There are no reliable and comprehensive data sources available that could be used to develop evidence-based best practices for use of force. As a result, there currently exists a plethora of policies, training programs and procedures designed to guide officers on how to appropriately use force. Since none of these policies or programs have been evaluated for their effectiveness, agencies have no way of knowing whether their existing practices should be maintained,

[1] "Data on Use of Force by Police Across U.S. Proves Almost Useless," New York Times, August 11, 2015.
[2] .National Use-of-Force Data Collection
[33] Federal Bureau of Investigation – Crime Data Explorer – National Use of Force Data
[4] Law Enforcement: DOJ Can Improve Publication of Use of Force Data and Oversight of Excessive Force Allegations, U.S. Government Accountability Office, December 7, 2021.

modified, or overhauled. Some organizations such as the Police Executive Research Forum (PERF) have attempted to develop guidelines on how officers should appropriately use force.[5] Unfortunately, with no data or evidence to back up the effectiveness of these new proposals, they are often met with skepticism and resistance by the law enforcement community.[6] By issuing recommendations for sweeping reforms without providing any data to support those recommendations, the chasm between the public and police may actually widen as we debate how the police should reform themselves.[7]

The US Department of Justice (DOJ) has attempted to reform dozens of law enforcement agencies over the last 27 years through a series of consent decrees and collaborative reform projects.[8] Consent decrees can cost local governments millions of dollars and it can take a decade or more to reach compliance with court ordered mandates.[9] Unfortunately, one thing that all consent decrees have lacked is a systematic and comprehensive data collection program that would be capable of assessing the effectiveness of the reforms and the long-term impacts of the decrees.[10] A few studies by academic researchers have determined that the benefits of consent decrees are mixed at best.[11]

In May 2015, the Obama Administration launched the Police Data Initiative.[12] This initiative was the result of recommendations from the Task Force on 21st Century Policing[13] and it has two

[5] Guiding Principles on Use of Force, Critical Issues in Policing Series, Police Executive Research Forum, March 2014.
[6] Statement of the International Association of Chiefs of Police and the Fraternal Order of Police on PERF's Proposed Use of Force Standards, February 2014.
[7] Protocol for reducing police shootings draws backlash from unions, chiefs group, Washington Post, March 31, 2014.
[8] POLICE REFORM AND ACCOUNTABILITY ACCOMPLISHMENTS, US Department of Justice, December 4, 2015.
[9] Are police consent decrees an asset? Depends on who you ask, AP News, May 22, 2022.
[10] Police Consent Decrees Are Coming Back — But They Might Not Make Sense Anymore, NPR, June 22, 2021.
[11] "Do federal consent decrees improve local police departments? This study says they might," Washington Post, May 24, 2014.
[12] "Launching the Police Data Initiative," The White House President Barack Obama, May 18, 2015.
[13] Final Report of the President's Task Force on 21st Century Policing, May 2015.

primary goals: (1) Use open data to build transparency and increase community trust, and (2) Provide internal accountability and effective data analysis. One of the data elements collected by the initiative is police use of force. This data is currently available on an open data portal managed by the Police Foundation.[14] Only 19 law enforcement agencies have provided their data on use of force incidents and each of those agencies has a different method for reporting their stats.[15] Some agencies only include three fields of information while others have more than thirty fields. Some agencies only report on officer involved shootings while others report on all uses of force including the pointing of a firearm. Unfortunately, the use of force data provided to the Police Data Initiative provides little insight into how officers are using force and where efforts on reform need to be focused.

The State of California recently adopted one of the most comprehensive use of force data collection programs in the country.[16] The URSUS system uses an online reporting tool[17] to collect data from all law enforcement agencies in the state. The California DOJ provides access to some of the data on its Open Justice Portal[18] and releases annual reports.[19] The main limitation of URSUS is that it only collects data on use of force incidents that result in serious bodily injury or death of a civilian or officer or the discharge of a firearm. Each year about seven hundred use of force incidents that meet the URSUS reporting criteria (deadly force or serious bodily injury) are reported to the California Attorney General's Office. This amounts to is less than 2% of the estimated 45,000[20] uses of force that occur in the state each year. Only twenty-two of the state's

[14] Police Data Initiative Open Data Portal
[15] Police Data Initiative, Use of Force.
[16] "California Launches Digital Platform to Collect Police Use-of-Force Data," Techwire.net, September 22, 2014.
[17] California Department of Justice URSUS Use of Force Incident Reporting
[18] California DOJ Open Justice Portal
[19] Use of Force Incident Reporting 2021, California Department of Justice.
[20] This estimate of the total number of use of force incidents in the state was derived from the total number of arrests in 2016 (1,120,759) multiplied by 4% which is the average use of force rate per arrest of the thirty-two law

568 law enforcement agencies had more than five incidents to report to URSUS in 2021 and three-quarters of all agencies in the state did not have any deadly force incidents to report. While the URSUS system is a good first step, the limited amount of data it contains will provide little guidance to any department that wants to implement data-driven reforms.

While URSUS captures data on all firearms discharges, most officers will go their entire careers without ever discharging their firearms in the line of duty.[21] By contrast, half of the nation's 800,000 law enforcement officers will use some type of force at least once each year. We need to begin collecting and analyzing data on all use of force incidents so that agencies can craft evidence-based best practices and closely monitor officer behavior in the field.

A few other states like New Jersey,[22] Ohio,[23] and New York[24] have recently begun collecting use of force data with limited success. Since these data collection systems were not designed by data scientists, the information collected is not useful for academic research and analysis and the data can be easily misinterpreted and misused.[25]

As a result of the lack of available data on police use of force several advocacy groups[26] and media outlets[27] have created crowdsourced databases from news reports and other public records. The data is limited to officer involved deaths and only captures less than 2% of all police uses of force.

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enforcement agencies in the Police Force Analysis System℠. A use of force incident includes the use of any physical force to overcome resistance and/or the use of any weapon.

[21] According to a 2017 survey conducted by the Pew Research Center, 73% of law enforcement officers never fired their service weapon while on the job during their entire careers.

[22] REDUCING USE OF FORCE BY LAW ENFORCEMENT, Office of the Attorney General for the State of New Jersey.

[23] Police reported more than 2,000 cases to Ohio's use of force database last year, 19 News, January 20, 2023.

[24] Division of Criminal Justice Services for New York State – Use of Force Reporting

[25] Which cops are the roughest? Check the AG's website, NJ.com, April 11, 2021.

[26] See Mapping Police Violence and Fatal Encounters

[27] See The Washington Post and The Guardian

While these crowdsourced databases have many limitations and problems,[28] they do provide a more comprehensive data set than any federal source of national use of force statistics.[29]

The Attorney General of Texas does provide limited data on officer involved shootings.[30] The data collection program began in October 2015 and links are provided to short summary reports of each incident. It appears that there is data on about 1,500 deadly force incidents over the last seven years, but the raw data cannot be downloaded.

Some of the largest municipal police departments in Texas, including Dallas PD, provide use of force data to the public in a variety of formats:

- Dallas Police Department
- San Antonio Police Department
- Austin Police Department
- Houston Police Department
- Fort Worth Police Department
- Arlington Police Department

Each of these agencies provides different types of information on use of force incidents and each of them presents the data in different ways. For example, Houston PD provides use of force data on interactive dashboards. Dallas PD and Austin PD allow the raw use of force data to be downloaded, while Fort Worth PD and Arlington PD produce written use of force reports annually.

[28] Comparing Fatal Encounters, Mapping Police Violence, and Washington Post Fatal Police Shooting Data from 2015–2019: A Research Note, Criminal Justice Review, January 5, 2022.
[29] FBI may shut down police use-of-force database due to lack of police participation, Washington Post, December 9, 2021.
[30] Officer Involved in Shooting Reports, Attorney General of Texas.

Building the Data Infrastructure to Support Democratic Policing

The core function of the police in a democratic society is to protect life, liberty, and property, and coercion is the fundamental means by which they achieve those democratic goals. While the police perform many complex and important roles within the communities they serve, the single defining characteristic of the police is their capacity to both verbally and physically coerce individuals to do things that they are not otherwise inclined to do, particularly those individuals who are not obeying the rules. To be able to do this efficiently and effectively, the police must be viewed as a legitimate authority by the citizens they serve. This perceived legitimacy is driven by transparency in police decision-making, the presence of sufficient accountability structures, and perhaps most important, fundamental fairness in the distribution of coercive authority.

Democratic policing is thus a process rather than an achievable end in itself, and it can only be demonstrated through constant evaluation in order to ensure that these democratic ideals are being satisfied. This process of evaluation requires adequate information about coercion. Recent tragic high-profile events have renewed our focus on an old problem: the fact that we simply do not have enough data about police coercion. The most important task to improve the quality of policing in the United States is to systematically collect and report data on police coercion, and to understand the distribution of coercion across people, places, and time.

Police Strategies LLC has partnered with the Crime and Justice Research Center at Seattle University to develop comprehensive information about the intersection of individual and contextual factors that explain situational, temporal, and spatial variation in the distribution of police coercive authority with attention to the ways in which demographic factors such as race/ethnicity, gender, and age, situational/historical/individual characteristics such as mental illness, homelessness, and location impact police-citizen interactions and police coercive control. Data from this system will produce research and support community engagement about the relationship between the intersection of race, age, gender, status, and behavior on police coercion.

Police Strategies LLC

Police Strategies LLC is a Washington State based company that was formed in February 2015. The company was built by law enforcement professionals, attorneys, and academics with the primary goal of helping law enforcement agencies use their own incident reports and existing information to make data-driven decisions and develop evidence-based best practices. The company's three partners are all former employees of the Seattle Police Department and were directly involved with the Department of Justice's 2011 pattern or practice investigation of the Seattle PD as well as the federal consent decree that followed. They wanted to take the lessons learned from that experience and provide other police departments with the tools they need to monitor their use of force incidents, identify high risk behavior, and evaluate the outcomes of any reforms that are implemented.

Bob Scales is a former King County officer prosecutor and Special Assistant United States Attorney for the Western District of Washington. He worked for 14 years for the City of Seattle as a public safety policy advisor for three Mayors. Kathryn Olson served as an EEOC attorney and the Director of the Office of Professional Accountability for the Seattle Police Department. She is a past president of the National Association for Civilian Oversight of Law Enforcement (NACOLE). Chief Mike Sanford has over 30 years of law enforcement experience serving as Assistant Chief for the Seattle Police Department and Chief of Police for the cities of Wapato and Algona Washington. Mike was a patrol tactics trainer for the Washington State Criminal Justice Training Commission.

The company has partnerships with the Crime and Justice Research Center at Seattle University and the Criminology and Criminal Justice Department at the University of Texas at Dallas. Academic researchers have used the data from the Police Force Analysis System℠ to produce peer reviewed journal articles including:

- Use of vascular neck restraints in law enforcement: A case-study of Spokane, WA, Police Practice and Research, July 5, 2021.
- Prevalence and correlates of spitting on police officers: New risks in the COVID era, Forensic Science International, May 2021.
- Police Use of Force and Injury: Multilevel Predictors of Physical Harm to Subjects and Officers, Police Quarterly, November 8, 2021.

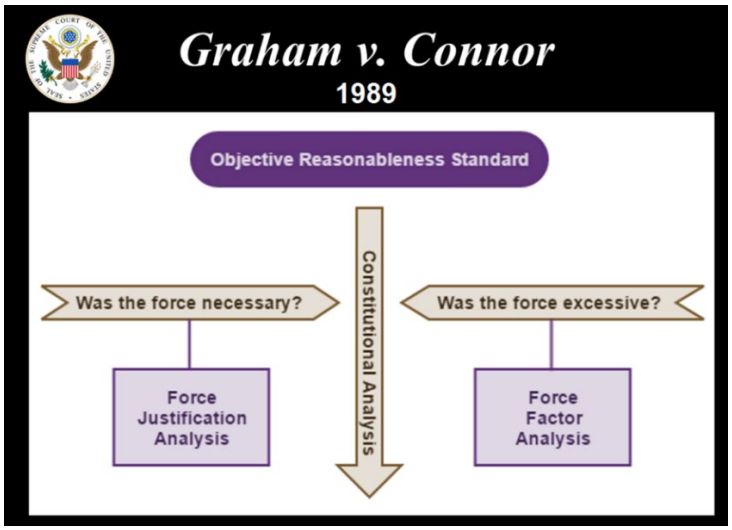
Police Force Analysis System℠

In the summer of 2015, Police Strategies LLC launched the Police Force Analysis System℠ (PFAS). PFAS combines peer-reviewed research with state-of-the-art analytical tools to produce a powerful data visualization system that can be used by law enforcement, policy makers, academics, and the public.[31] The core of PFAS builds upon the research work of Professor Geoff Alpert and his Force Factor method. Force Factor analysis formed the basis of Professor Alpert's 2004 book "Understanding Police Use of Force – Officers, Subjects and Reciprocity"[32] and has been the subject of several scholarly articles.[33]

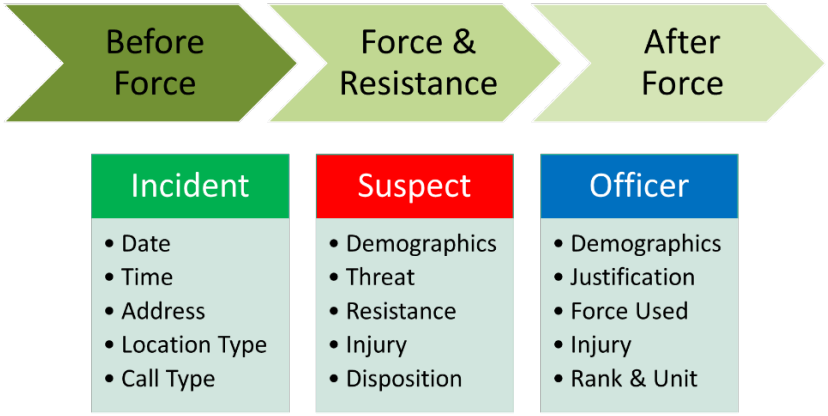
PFAS is a relational database that contains 150 data fields of information extracted from law enforcement agencies' existing incident reports and officer narrative statements. The data is analyzed using legal algorithms that were developed from the evaluation criteria outlined in the United States Supreme Court case of *Graham v. Connor*, 490 U.S. 386 (1989). The Court adopted

[31] Capitola Police creates online database to track use of force stats, Santa Cruz Sentinel, August 2014.
[32] Understanding Police Use of Force – Officers, Subjects, and Reciprocity, Cambridge Studies in Criminology, 2004.
[33] See, e.g., Reliability of the Force Factor Method in Police Use-of-Force Research, Police Quarterly, December 2015.

an objective reasonableness standard which evaluates each case based upon the information that the officer was aware of at the time the force was used and then comparing the officer's actions to what a reasonable officer would have done when faced with the same situation. PFAS uses Force Justification Analysis to determine the risk that a use of force incident would be found to be unnecessary and Force Factor Analysis to evaluate the risk that the force would be found to be excessive.



PFAS examines relevant temporal data from immediately before, during and after an application of force.



PFAS uses powerful data visualization software to display information on dynamic interactive dashboards. These dashboards can be used by police management to identify trends and patterns in use of force practices and detect high risk behavior of individual officers. The system can also be used to spot officers who consistently use force appropriately and effectively. Since the system can find both high risk and low risk incidents, PFAS can be used to correct problematic behavior as well as a training tool that highlights existing best practices among officers.

PFAS contains historical data for each agency and is designed to be updated on a regular basis. This allows the department to immediately identify trends and patterns as well as measure the impacts and outcomes of any changes that are made to policies, training, equipment, or other policing practices. For example, if a department provides crisis intervention and de-escalation training to its officers, the PFAS will be able to evaluate whether that training has had any impact on officer behavior.

PFAS currently has use of force data from 102 law enforcement agencies in eight states involving about 15,000 incidents and 8,000 officers who used force more than 25,000 times. PFAS is the largest and most comprehensive database of its kind in the nation. Although the incident reports from each of these agencies uses a different format, all the data extracted and entered into the system has been standardized which allows us to make meaningful interagency comparisons. The Police Force Analysis Network℠ allows agencies to compare their use of force practices with other agencies using the system.

The Police Force Analysis System℠ provides comprehensive information about police use of coercive authority and permits the study of the intersection of individual and contextual factors that explain situational, temporal, and spatial variation in the distribution of police uses of force. PFAS supports meaningful community engagement about police coercion by providing comprehensive and relevant data to address and inform public concern regarding police-citizen interactions.

Key Findings from the Police Force Analysis System℠

Under our partnerships with Seattle University and the University of Texas at Dallas, we are continuously analyzing the use of force data from all the agencies in the Network to identify trends, patterns, correlations, and outcomes. Here are some of our key findings that were derived from the 102 agencies that have provided data for the system:

❖ Uses of Force are Linked to Arrests

Most use of force incidents are associated with an attempt by an officer to bring an individual into custody. If a subject resists a lawful arrest or detention, then it is usually necessary for the officer to use some type of force to gain control of the subject. A decline in use of force incidents is normally the result of falling arrest numbers, while an increase in force incidents is usually caused by a rising number of arrests.

While many people view any use of force by police as a negative outcome regardless of how or why the force was used, our data shows that officers cannot do their jobs effectively without using some amount of force in appropriate circumstances. No matter how much de-escalation training an officer receives, there will always be a certain percentage of arrestees who will resist or flee regardless of what the officer says or does. PFAS data shows that on average about 4% of arrests involve some type of police use of force.

Some departments have seen dramatic declines in uses of force when consent decrees are imposed, when departments come under intense public scrutiny or when body cameras are first implemented. However, these declines in uses of force are almost always associated with a corresponding decline in arrests as officers become less proactive and they are more reluctant to engage in situations involving minor crimes, infractions, or suspicious circumstances.

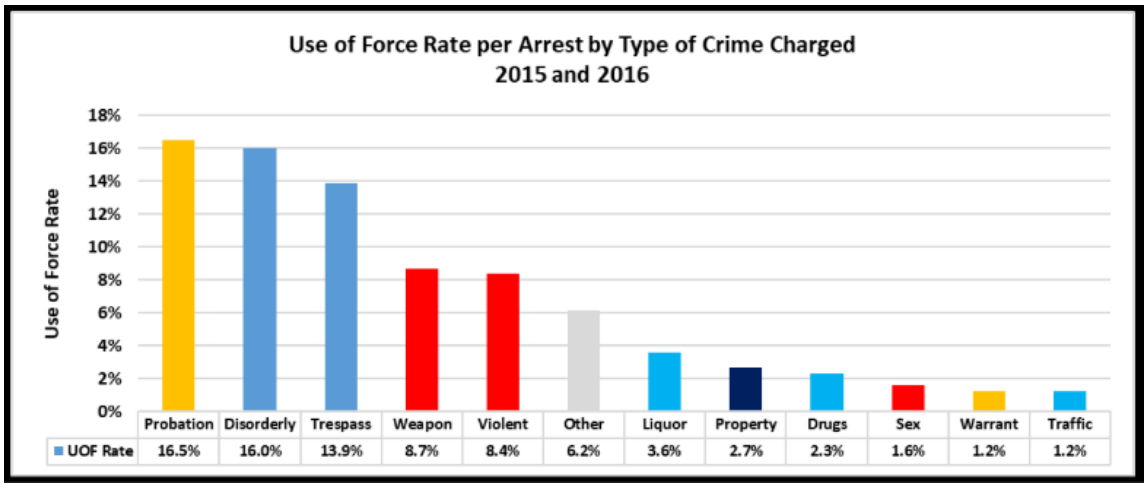
There is a strong correlation between the total number of uses of force a department has and the total number of arrests their officers make. Similarly, the more proactive and productive officers are, the more arrests they will make and the more uses of force they will have. Rather than simply measuring the frequency of force, a better metric to assess risk is the number of

uses of force compared to number of arrests made. For example, an officer who makes ten arrests and uses force against four of those subjects (40% use of force rate) is a higher risk than an officer who makes three hundred arrests and uses force against twelve subjects (4% use of force rate).

When an agency begins to analyze its use of force incidents, the focus should be on the use of force rate per arrest, the necessity of the force used (i.e. whether the force was justified) and the proportionality of force to resistance (i.e. whether the force was excessive).

❖ The type of crime involved determines the likelihood of resistance.

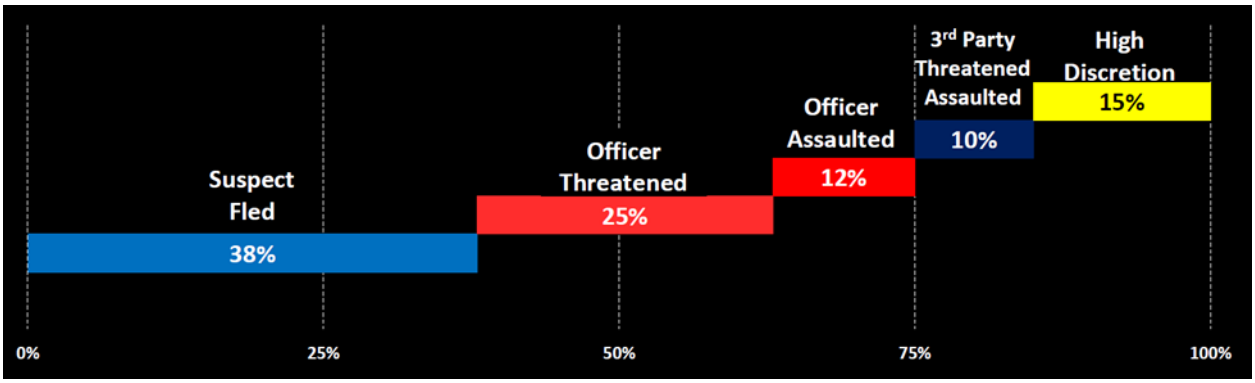
Whether an officer decides to use force during an arrest is determined primarily by the subject's behavior. If the subject fails to comply with a lawful order or resists being taken into custody, the officer will need to use force to make the arrest. Based on the data from the Police Force Analysis System℠, subjects who are engaged in disorderly conduct or trespassing or are in violation of parole or probation are the most likely to resist arrest (about 15% of the time). Subjects who are involved with drug or property crimes and traffic offenses are the least likely to resist officers (less than 3% of the time). This means that the types of crimes officers are responding to will influence a department's use of force rates.



❖ **Most decisions to use force involve low levels of discretion.**

There are four primary factors that will motivate an officer to use force:

1) Suspect fled from the officer (38% of all force incidents)
2) Subject threatened the officer verbally or physically (25% of all force incidents)
3) Subject assaulted the officer before force was used (12% of all force incidents)
4) Subject threatened or assaulted a third party in the officer's presence (10% of all force incidents.



The presence of one or more of the above factors creates a sense of immediacy for the need to use force and often the officer will have no reasonable alternative than to use force. In only 15% of all force incidents, none of the four factors were present. In these circumstances the officer may have additional options and more time available to attempt to bring the subject into custody without having to use force. These are the types of situations where de-escalation techniques can be used most effectively.

❖ **Force Factor will often determine the outcome of use of force incidents.**

The Force Factor examines the level of force used compared to the level of resistance presented. While high Force Factor scores may be an indicator of potential excessive uses of force, if the officer does not respond with a sufficient level of force, it can take much longer to bring the subject under control with a much higher risk of injury to the officers involved. High Force Factor incidents are resolved quickly with a minimal risk of injury to officers but with a higher subject injury rate. In any given situation, officers must make quick decisions about both the timing of force and the level of force to use in order to effectively take control of the subject and minimize the risk of injury to both officers and subjects.

Outcome % of Force Incidents	Low Force Factor	Medium Force Factor	High Force Factor
Short Force Duration	24%	26%	64%
Subject Injury Rate	36%	48%	68%
Officer Injury Rate	21%	16%	4%

❖ **Members of the public tend to be more concerned about the fact that force was used at all rather than the level of force that was used.**

Some of the agencies in the Police Force Analysis Network℠ have provided data on complaints about uses of force and this data has been incorporated into PFAS. An analysis of that data has shown that when individuals complain about officers using excessive force against them, it is more common for these incidents to have a low Force Justification Score rather than a high Force Factor Score. It appears that the primary motivation for the use of force complaint is not the level of force that was used, but the fact that force was used at all. Complaints about uses of force are most common when low levels of force are used against individuals who are engaged in minor crimes or infractions or when they are suspected incorrectly of being involved in criminal behavior. When these individuals fail to cooperate, the officer can usually gain control with a minimal amount of force and no injury. However, the subjects in these types of situations tend to view any level force used against them as unwarranted since they believe the officer does not have the authority to detain them. By contrast when a subject was engaged in serious criminal behavior, threatened the officer, actively resisted, and/or tried to flee, subjects are less likely to complain even if the officer used an extremely high level of force and the subject sustained an injury. This finding is consistent with a study from the John F. Finn Institute for Public Safety on procedural justice:

> "In our recently published study of policing, Mirage of Police Reform, we found that citizens' assessments of procedural justice are shaped much less by how officers use their enforcement powers—such as using physical force or conducting searches—than whether they use them…[I]ndividual officers' decisions about whether to use their coercive authority matter far more to public perceptions of police legitimacy than how they use it."[34]

[34] "Building Trust in Police: What Really Works?" The Crime Report, Center of Media Crime and Justice at John Jay College, July 18, 2014.

Demographic Disparity Analysis

While census data of the residential population is sometimes used as a benchmark for a demographic disparity analysis, population does not provide an adequate measure to assess the possible impacts of bias by police officers. There are many factors that could affect the demographic disparities between uses of force and the population that have nothing to do with officer bias such as crime rates, compliance rates, possession of weapons, poverty rates, deployment strategies, etc.

A better benchmark for measuring demographic disparities in police uses of force is arrest data.[35] Almost every use of force incident is associated with an arrest. All things being equal, we would expect to see the same proportion of subject characteristics for those who are arrested as those who have force used against them. If there is any demographic disparity observed between the use of force data and the arrest data, this disparity could be caused by differential subject behavior (i.e. one subject group is more or less likely to resist arrest than other groups) or differential officer behavior (i.e. officers are more or less prone to use force against one subject group than other groups) or a combination of differential behavior from both subjects and officers.

[35] For a more detailed examination of benchmarking practices see APPENDIX B - Traditional Racial Disparity Analysis

Data Used

This report examines demographic disparities found in law enforcement data from Dallas PD. The methodology[36] used in this report differs from traditional racial disparity studies in two regards:

1) Traditional studies only examine disparities by race. This study explores disparities by sex and age in addition to race.

2) Traditional studies use population-based benchmarking to calculate disparities. This study uses reported crimes as an initial benchmark and then employs activity-based benchmarking to calculate the disparities for each subsequent law enforcement activity.

The disparity calculations for both the population-based benchmarking approach and the activity-based benchmarking approach use the same data sets from the same data sources.

Data	Data Source	Date Range	Records
Dallas Population	US Census	2021	1,304,379
Crime Victims	National Incident Based Reporting System (NIBRS)	2017-2021	388,816
Reported Offenders	National Incident Based Reporting System (NIBRS)	2017-2021	420,019
Arrestees	National Incident Based Reporting System (NIBRS)	2017-2021	61,143
Uses of Force	IAPro/BlueTeam & PFAS	2017-2021	6,634

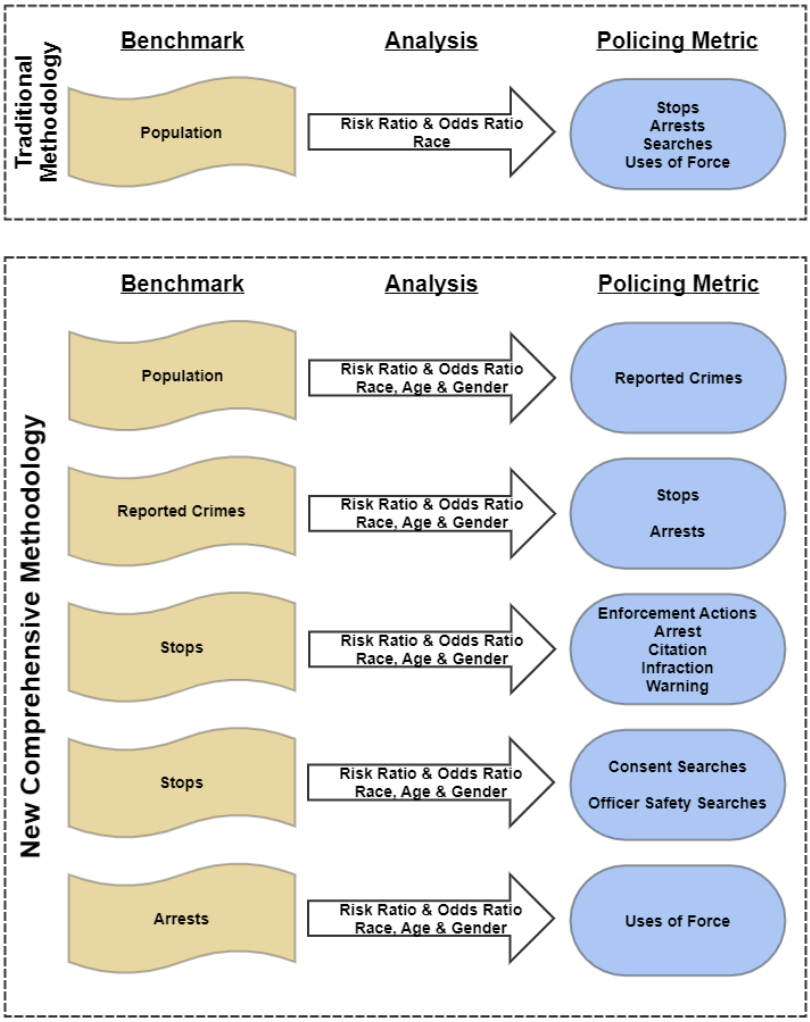
It should be noted that the law enforcement data for this study came from existing records management systems that are normally used for law enforcement purposes only. These data systems were not designed to provide data for statistical analysis. Missing and unknown records were excluded from all calculations. Another caveat is that census data on race cannot directly be compared with law enforcement data. This is because census data distinguishes between race and ethnicity while the law enforcement data often combines race and ethnicity into a single category. In addition, the census data allows individuals to identify as more than one race. Nearly 9.3% of Dallas residents identify as mixed race. Since the law enforcement data does not include data on mixed race individuals, the mixed-race category was excluded from the census data and these individuals were distributed proportionally among the other racial groups.

[36] See APPENDIX A - Data Sources & Statistical Methods Used

Benchmarking

A critical component of any disparity analysis is the benchmark that is used as the baseline for the risk ratio calculation. The traditional racial disparity methodology relies on the census population as the primary benchmark and uses population-based benchmarks to produce the Risk Ratios and Odds Ratios. This report uses one population-based calculation when comparing the demographics of suspects in reported crimes with the demographics of the census population of Dallas. Our new disparity methodology relies primarily on activity-based benchmarks. Each Risk Ratio is calculated using the immediately preceding policing activity that is most closely correlated with the activity being measured.

Benchmarking for Disparity Analysis



- **Population as the Benchmark for Reported Crimes**

  The demographics of a city's population are a relevant benchmark for an examination of disparities with identified subjects in reported crimes. By using population as a benchmark, we can determine whether certain types of individuals are more or less likely to be reported as being involved in criminal activity.

- **Reported Crimes as the Benchmark for Stops and Arrests**

  Stops and arrests made by police officers will be heavily influenced by calls for service (911 calls reporting crimes and non-emergency calls for service) and unlawful conduct that is observed by officers (officer-initiated stops). An agency's deployment strategy will be based, at least in part, on calls for service. Areas with a higher number of reported crimes will receive a greater proportion of policing services. Therefore, reported crimes are a more appropriate benchmark for stops and arrests than the city's population. For example, if 20% of a city's population were young White Males but 80% of all reported crimes involved young White Males, we expect the demographics of police stops and arrests to mirror reported crimes and not the population. If there were significant disparities between stops/arrests and reported crimes, then we would want to examine this in more detail to determine the root causes of these unexpected disparities.

- **Stops as a Benchmark for Arrests and Searches**

  A stop is a precursor for any subsequent law enforcement action such as making an arrest, issuing an infraction or citation, conducting a search, or using force.

- **Arrests as Benchmark for Uses of Force**

  Officers may only use force if they have reason to believe that the suspect is engaged in criminal activity and the suspect presents some level of resistance to the officer's commands or actions or is threatening the officers or others. Since almost all uses of force are associated with an arrest, arrests are the best benchmark to measure disparities in uses of force.

One of the best peer-reviewed academic journal articles on benchmarking police data was done by researchers at the University of Nebraska and the University of South Carolina in 2018.[37] The study examined the odds of Black citizens being fatally shot relative to White citizens using various benchmarks. The following benchmarks consistently produced the highest disparities:

- Population
- Average number of police-initiated contacts
- Average number of traffic stops

When total arrests were used as a benchmark the racial disparities were dramatically reduced. When arrests for violent crimes or weapons offenses were used as the benchmark, Black citizens were less likely than White citizens to be fatally shot by police.

[37] Disparity does not mean bias: making sense of observed racial disparities in fatal officer-involved shootings with multiple benchmarks, Tregle, Nix, and Alpert, Journal of Crime and Justice, 2018.

Analysis & Methodology

An examination of demographic disparities in policing activities is a vital component of an overall risk assessment for a law enforcement agency. The identification of demographic disparities can highlight areas in need of additional focus and study. Disparity data can also provide useful information for a police department to use as it engages with the community and can promote transparency and more informed discussions about policing issues. However, there are significant limitations on the conclusions that can be reached based solely on a quantitative analysis of demographic disparities.

Disparities can be used to identify correlations with other variables, but these correlations cannot be used to make findings or conclusions as to causation. For example, the presence of a racial disparity in a policing activity does not necessarily mean that officers are engaged in biased policing or racial profiling. Similarly, the absence of racial disparities does not necessarily mean that officers are not engaged in individual acts of racial discrimination. The examination of racial disparities is just a starting point for a broader discussion and a more comprehensive examination of how officers behave and why they make the decisions they do.

Our analysis highlights several demographic disparities in policing activities conducted by Dallas PD. Many of these same disparities are found in other police departments in Texas and in departments across the country.

Disparities in Crime Victims

Compared to their share of the population, Male and Female residents of Dallas are equally likely to report being the victim of a crime. Black residents are nearly twice as likely as White residents to report being a crime victim while Hispanic and Native American residents are slightly less likely than White residents to be a crime victim. Asian residents are 50% less than White residents to be the victim of a crime. When the age of crime victims is compared to the demographics of the population, we find that those between the ages of 18 and 39 are 60% more likely to be a crime victim while juveniles are 80% less likely than would be expected based on their share of the population.

Disparities in Reported Crimes

Males are nearly four times more likely than Females to be involved in crimes that were reported to Dallas PD. This type of disparity is not unique to Dallas, and this same pattern of behavior can be found across the country and around the world. Males are much more likely than Females to engage in criminal behavior.[38]

The peak age group or criminal activity are those individuals between the ages of 18 and 29 while juveniles are the least likely age group to commit crimes. In Dallas those who are 18-29 are nearly eight times more likely than juveniles to be reported as a crime suspect. These disparities also mirror patterns found in other jurisdictions throughout the country.[39]

Unlike sex and age, the issue of race and criminal behavior[40] is more controversial.[41]

While it is safe to assume that there is no police department in the country that is "bias free" and we should assume that every law enforcement agency will have some incidents involving

[38] "Gender and Crime - Differences Between Male And Female Offending Patterns," Law Library - American Law and Legal Information.
[39] "Why do young men commit more crimes?" Future Learn.
[40] "Do black Americans commit more crime?" Channel 4 News, November 27, 2014.
[41] "Another 'excuse' for police bias bites the dust," The Minnesota Post, June 4, 2019.

individual acts of bias or discrimination, it is also true that Black subjects are typically identified as suspects in crime reports at rates that are higher than their share of the population.[42] Some of the racial disparities seen in crime reporting could be due to victim bias. Recently there have been high profile incidents caught on video where white "victims" call the police to report a Black suspect committing a crime when no criminal behavior is occurring.[43] Whether or not racial bias is involved in the reporting of crimes, the police are still receiving a higher percentage of crime reports involving Black suspects from victims of the same race as the suspect. In response, the police will investigate these incidents and will make stops and arrests based upon information provided by victims and witnesses.

In Dallas, crime victims are nearly seven times more likely to report that the suspect was Black rather than White. Hispanic individuals were nearly twice as likely as White individuals to be reported as a crime suspect. Native American individuals were just as likely as White individuals to be a reported crime suspect while Asian individuals were 60% less likely to be a reported crime suspect.

Disparities in Arrests

There is a close correlation between reported crimes and arrests. The more reported crimes involving a specific demographic group, the more likely it is that members of that group will be stopped and investigated by the police. Disparities in arrests may be a function of the types of crimes being committed, the seriousness of those crimes (e.g. felony, gross misdemeanor, misdemeanor), the ability of victims and witnesses to identify the suspects and whether the suspects remain at the scene of the crime. If officers are engaged in racial profiling and they target one race for enforcement actions while ignoring criminal behavior of other races, that would also drive the racial disparities observed.

When the demographics of arrestees is compared with the demographics of reported crime suspects in Dallas, there are no disparities by the gender of the arrestee. White and Native

[42] "Invest in underserved communities before cutting police budgets," The Seattle Times, June 24, 2022.
[43] "Amy Cooper Faces Charges After Calling Police on Black Bird-Watcher," July 6, 2020.

American arrestees are about 40% more likely to be arrested than would be expected based on their share of reported crime suspects. Other racial/ethnic groups are arrested in proportion to their share of reported crime suspects. Individuals over 50 are 60% less likely to be arrested than would be expected based on their share of reported crime suspects. This may be due to the nature of crimes committed by this age group that may not typically result in an arrest.

Disparities in Uses of Force

During the arrest process, Males were 20% more likely than Females to have force used against them. Compared to White arrestees, Asian arrestees were 10% less likely to have force used against them, Black arrestees were 20% less likely, and Hispanic arrestees were 30% less likely. Native American arrestees were 50% more likely than White arrestees to have force used against them. However, it should be noted that the number of uses of force involving Native Americans is only about four per year, so a small change in the numbers could produce a large change in the odds ratios. All age groups were proportionally represented in use of force incidents except for arrestees over 50 who were 30% less likely to have force used against them.

Any disparities found in uses of force are likely the result of disparities in subject resistance (i.e. a higher disparity means that demographic group is more likely to resist arrest). Dallas PD already has a data system and investigatory process in place to investigate every use of force incident to ensure that it was justified and within policy and not excessive. If there were systemic problems with use of force practices that generated the disparities observed, these problems would have been identified and corrected during the investigatory process.

These data sources received from Dallas PD yielded the following results:[44]

Dallas PD - Demographic Percentages by Data Source

Data Source		Census	NIBRS	NIBRS	NIBRS	PFAS
Data Type		Population	Crime Victims	Reported Suspects	Arrestees	Uses of Force
# Records		1,304,379	388,816	420,019	61,143	6,634
Sex	Female	50.4%	49.6%	21.4%	23.1%	19.9%
	Male	49.6%	50.4%	78.6%	76.9%	80.1%
Race	Hispanic	43.5%	32.6%	30.0%	30.3%	26.8%
	White	28.9%	27.0%	10.5%	14.3%	17.6%
	Black	23.6%	38.6%	58.9%	54.7%	54.7%
	Asian	3.8%	1.6%	0.5%	0.6%	0.7%
	Nat Amer	0.2%	0.2%	0.1%	0.1%	0.2%
Age	0-17	24.8%	4.0%	5.7%	5.4%	6.5%
	18-29	19.2%	31.6%	33.6%	40.6%	41.9%
	30-39	16.0%	25.9%	22.7%	27.9%	30.2%
	40-49	12.0%	17.0%	10.8%	14.2%	13.4%
	50+	28.0%	21.6%	27.3%	11.9%	8.0%

Dallas PD – Risk Ratios by Data Source

Data Source		Census	NIBRS	NIBRS	NIBRS	PFAS
Data Type		Population	Crime Victims	Reported Suspects	Arrestees	Uses of Force
# Records		1,304,379	388,816	420,019	61,143	6,634
Benchmark			Population	Population	Offenders	Arrestees
Sex	Female	50.4%	1.0	0.4	1.1	0.9
	Male	49.6%	1.0	1.6	1.0	1.0
Race	Hispanic	43.5%	0.7	0.7	1.0	0.9
	White	28.9%	0.9	0.4	1.4	1.2
	Black	23.6%	1.6	2.5	0.9	1.0
	Asian	3.8%	0.4	0.1	1.2	1.2
	Nat Amer	0.2%	0.8	0.3	1.4	1.8
Age	0-17	24.8%	0.2	0.2	0.9	1.2
	18-29	19.2%	1.6	1.8	1.2	1.0
	30-39	16.0%	1.6	1.4	1.2	1.1
	40-49	12.0%	1.4	0.9	1.3	0.9
	50+	28.0%	0.8	1.0	0.4	0.7

[44] In some cases, police records that did not include demographic information (age, race, or sex) were excluded from the disparity analysis.

The following Disparity Matrix summarizes the risk ratios[45] of reported offenders, arrests and uses of force.

Dallas PD - Disparity Matrix

Data Source		Census	NIBRS	NIBRS	NIBRS	PFAS
Data Type		Population	Crime Victims	Reported Suspects	Arrestees	Uses of Force
# Records		1,304,379	388,816	420,019	61,143	6,634
Benchmark			Population	Population	Offenders	Arrestees
Sex	Female	50.4%	0	-	0	0
	Male	49.6%	0	++	0	0
Race	Hispanic	43.5%	-	-	0	0
	White	28.9%	0	-	+	0
	Black	23.6%	++	++	0	0
	Asian	3.8%	-	-	0	0
	Nat Amer	0.2%	0	-	+	++
Age	0-17	24.8%	-	-	0	0
	18-29	19.2%	++	++	0	0
	30-39	16.0%	++	+	0	0
	40-49	12.0%	+	0	+	0
	50+	28.0%	0	0	-	-

Symbol	Disparity	Risk Ratio
++	Positive	> +50%
+	Positive	+25% to +50%
0	None	-25% to +25%
-	Negative	-25% to -100%

[45] See APPENDIX A for a detailed explanation of the statistical methods used in this report.

Compared to the population of Dallas, Black individuals are about 60% more likely to report being the victim of a crime. Hispanic, White, and Native American individuals are about 20% less likely to report being a crime victim than would be expected based on their share of the population and Asian individuals are 60% less likely.

Black individuals are the only racial group to be overrepresented in reported crime offenders and are 2.5 times more likely to be reported as a crime suspect than would be expected based on their share of the population. Asian individuals are 90% less likely to be reported as a crime suspect than their population would suggest.

While Black individuals are overrepresented in reported crime suspects, Black suspects are 10% less likely to be arrested by Dallas PD officers than would be expected. This statistic suggests a lack of widespread racial bias against Black individuals among Dallas PD officers as well as the absence of systemic bias within the Dallas Police Department.

When reported crime suspects are used as the benchmark for measuring demographic disparities in arrests, there are no disparities observed based on the gender of the individuals arrested. White and Native American crime suspects are 40% more likely to be arrested than expected and Asian suspects are 20% more likely to be arrested. By age, suspects over 50 are 30% less likely to be arrested than expected.

When arrests are used as the benchmark for measuring demographic disparities in uses of force the only significant disparities observed were for Native American arrestees who were 80% more likely to have force used against them than expected. As noted previously these percentages are based on only four incidents each year so a small change in the numbers could create a large change in the disparities. Arrestees over 50 were 30% less likely to have force used against them.

While the disparities found in this study are relatively small compared to traditional population-based benchmarking studies, additional data collection and analysis could be conducted to determine the root causes of these disparities.

Based on the demographic data analyzed from Dallas PD on reported offenders, arrestees and those involved in use of force incidents, there is no evidence that would suggest that Dallas PD or its officers are engaged in systemic discriminatory practices against any particular demographic group. This finding does not rule out the possibility of individual acts of discrimination by officers. However, these types of isolated incidents will not be reflected in the aggregated data absent a widespread and systemic practice of discrimination.

Victims and Offenders

Data from the National Incident Based Reporting System (NIBRS) from 2018 to 2021 was used to examine the demographics of reported crime victims and reported offenders to Dallas PD.

Demographics of Crime Victims and Reported Offenders

There are demographic disparities in reported crime victims just as there are disparities in reported crime suspects and arrestees. Therefore, victim reporting behavior can also impact observed demographic disparities in policing actions such as stops and arrests. If some groups are more or less likely to report being the victim of a crime or if certain groups are more likely to be exposed to criminal behavior, this will impact the disparities in law enforcement data.

Male and Female victims are both more likely to report that the offender was a Male (78%) than a Female (22%). Males made up about three-quarters of all suspects reported by both Male and Female victims. Gender X victims were also more likely to report the offender was Male (82%).

Gender of Reported Offenders and Victim's Gender – Dallas PD

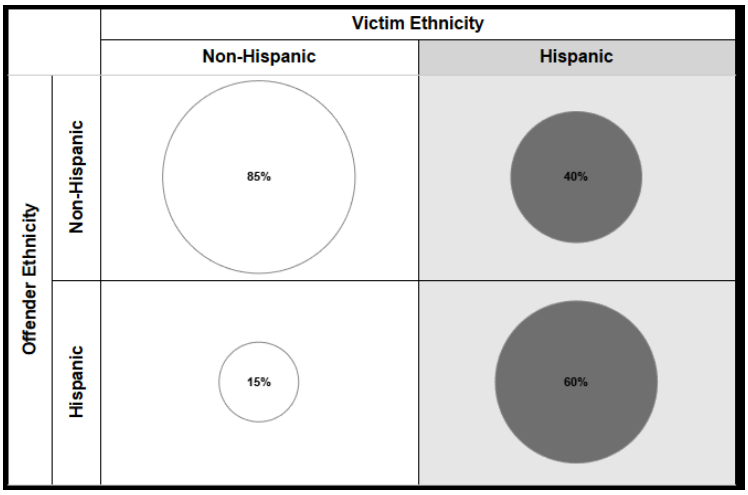
Sixty-three percent of White victims reported that the offender was also White, while 89% of Black victims reported that the offender was also Black. Only 12% of Asian victims reported that the offender was also Asian and 7% of Native American victims reported that the offender was also Native American. Black suspects made up the majority of offenders reported by Asian and Native American victims and 36% of the offenders reported by White victims. About a third of Asian and Native American victims reported that the offender was White. Less than 1% of White and Black victims reported that the offender was Asian or Native American.

Race of Reported Offenders and Victim's Race – Dallas PD

If criminal behavior was a random occurrence, then we would expect the offender demographics for each victim group to match the demographics of the population. For example, since Asian residents make up 3.8% of the Dallas population, we would expect each racial group of victims to report that 3.8% of the offenders were Asian. However, this is not the pattern that is observed in the data. White and Black crime victims are more likely to report that the offender was of the

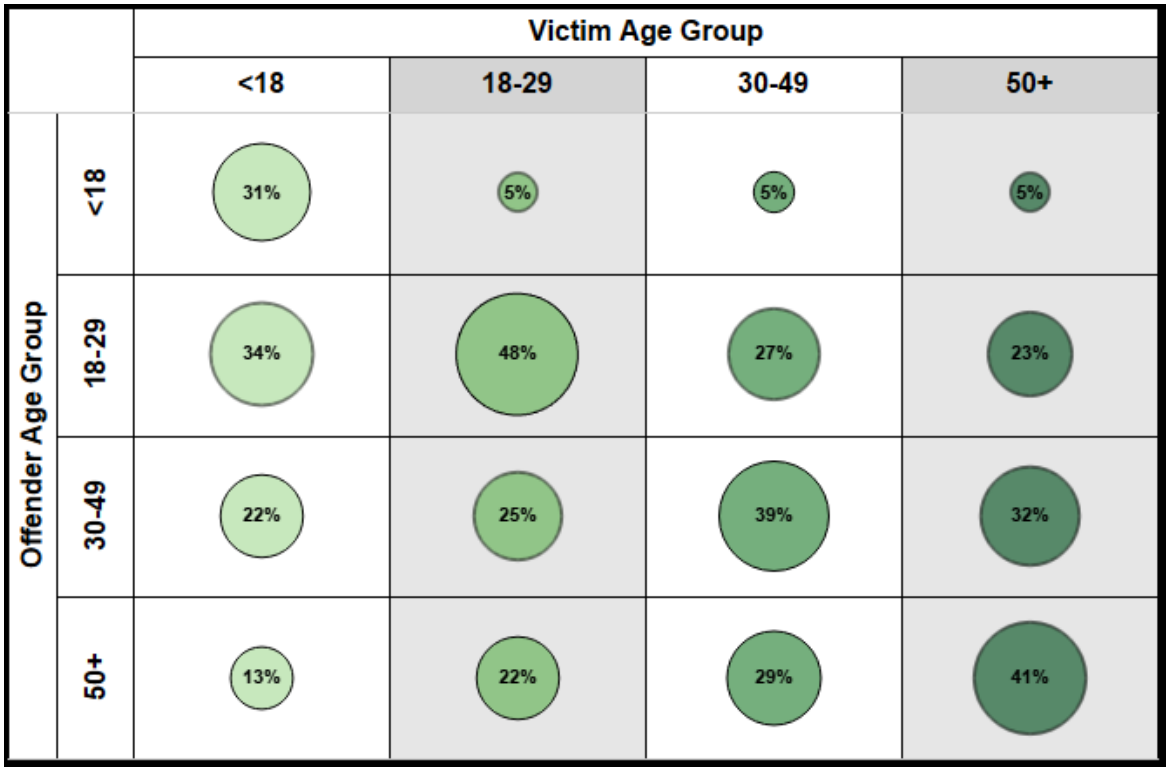
same race while Asian and Native American victims are more likely to report that the offender was of a different race.

Ethnicity of Reported Offenders and Victim's Ethnicity – Dallas PD



Eighty-five percent of non-Hispanic victims report that the offender was also non-Hispanic, while 60% of Hispanic victims report that the offender was also Hispanic.

Age of Reported Offenders and Victim's Age – Dallas PD



Only 5% of adult victims report that the offender was a juvenile, while 31% of juvenile victims report that the offender was also a juvenile. In general, victims are more likely to report an offender within their own age group or an adjacent age group.

Criminal behavior and victimization are not spread uniformly throughout the different demographic groups in the City of Dallas. There is a complex dynamic between victims and suspects that must be taken into consideration when examining racial disparities in reported crimes and policing activities. Simply using the census population as the underlying benchmark for calculating demographic disparities will present a distorted view of the data that is divorced from reality.

There are often personal relationships between victims and those who commit crimes against them. This dynamic further complicates the analysis and helps explain why there is sometimes a high percentage of incidents where the victim and suspect share similar demographic characteristics.

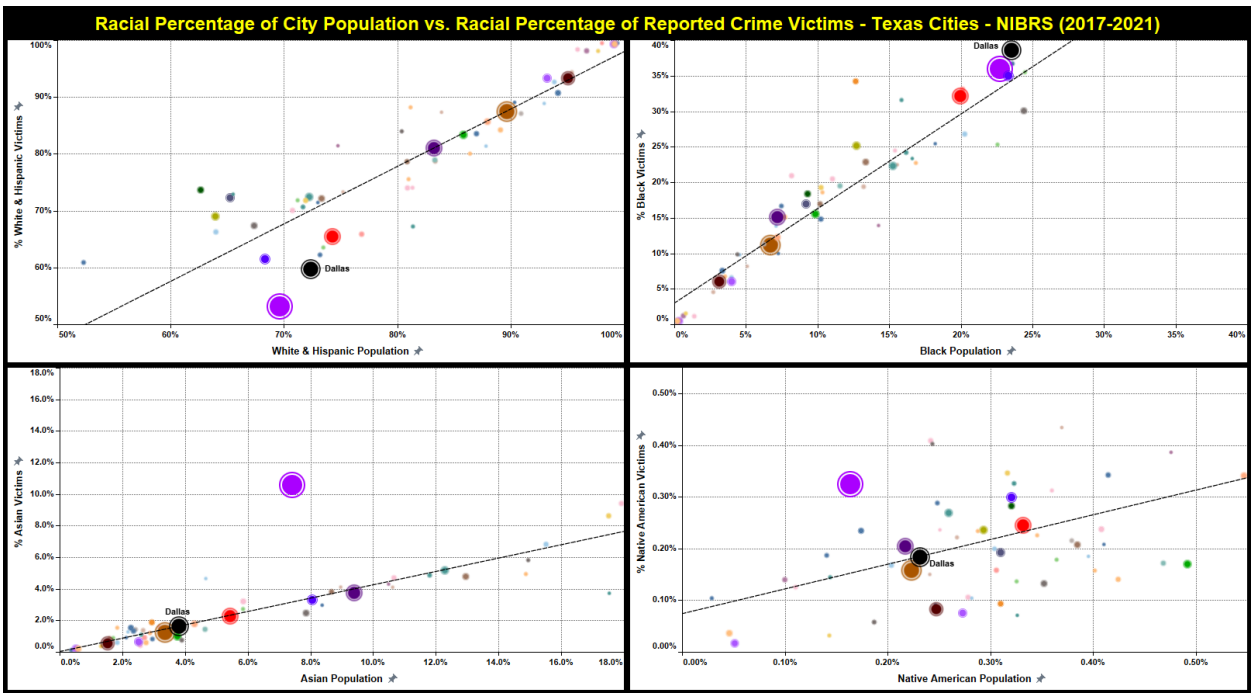
NIBRS Data for Texas Law Enforcement Agencies

Data from the National Incident Based Reporting System (NIBRS) from 2018 to 2021 was obtained for all law enforcement agencies in the state of Texas. This database consists of 4,593,594 victims, 4,695,811 reported offenders, and 934,245 arrestees. Since this data has been collected in a standardized manner, meaningful interagency comparisons can be made.

This section of the report will examine three types of racial disparities for the 595 municipal law enforcement agencies in Texas that submitted their data to NIBRS:

1) Crime Victims versus the Residential City Population
2) Reported Offenders versus the Residential City Population
3) Arrestees versus Reported Offenders for Each Municipal Agency

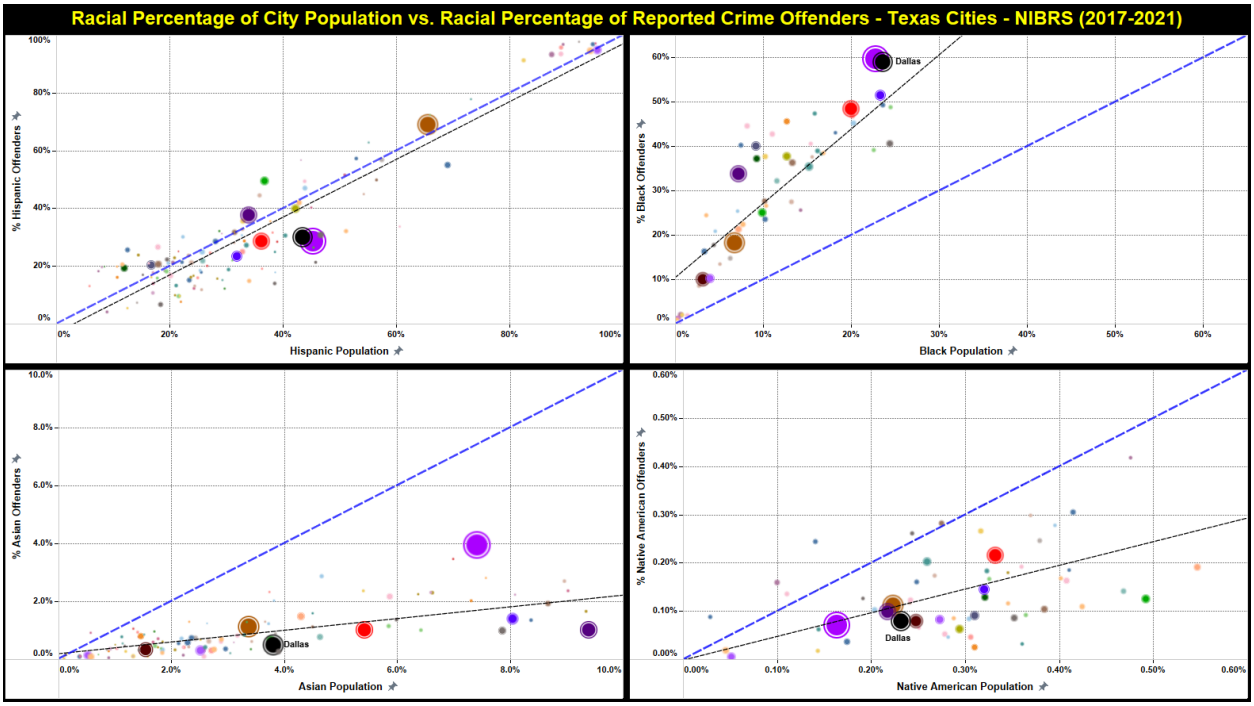
Racial Percentages of Crime Victims versus the Residential City Population – NIBRS (2018 to 2021) – Cities in Texas



When the racial breakdown of crime victims is compared with the demographics of the residential population in each city, some clear patterns emerge. Different racial groups are not equally likely to report being the victim of a crime. White and Hispanic residents generally report

being the victim of a crime at the rate expected based on their population. However, some cities like Frisco, Plano, and Sugarland have higher than average victimization rates for White/Hispanic residents and other cities like Houston, Dallas, Fort Worth, and Arlington have lower than average victimization rates. Black residents are 36% more likely to report being the victim of a crime than their population would suggest. In Dallas, Houston, Fort Worth, and San Antonio, Black residents are 60% more likely to report being the victim of a crime, while in Austin Black resident are more than twice as likely to be the victim of a crime as their population would suggest. In most cities in Texas, Asian residents are 60% less likely to report being the victim of a crime, but in Houston Asian residents are 40% more likely to report being a crime victim. The pattern for Native American victims is less clear. This is likely due to the very small population of Native Americans (less than 1%) in most Texas cities. In general, Native Americans are 50% less likely than their population to report being a crime victim, but in Houston Native Americans are more than twice as likely as their population to report being a victim.

Racial Percentages of Reported Offenders versus the Residential City Population – NIBRS (2018 to 2021) – Cities in Texas



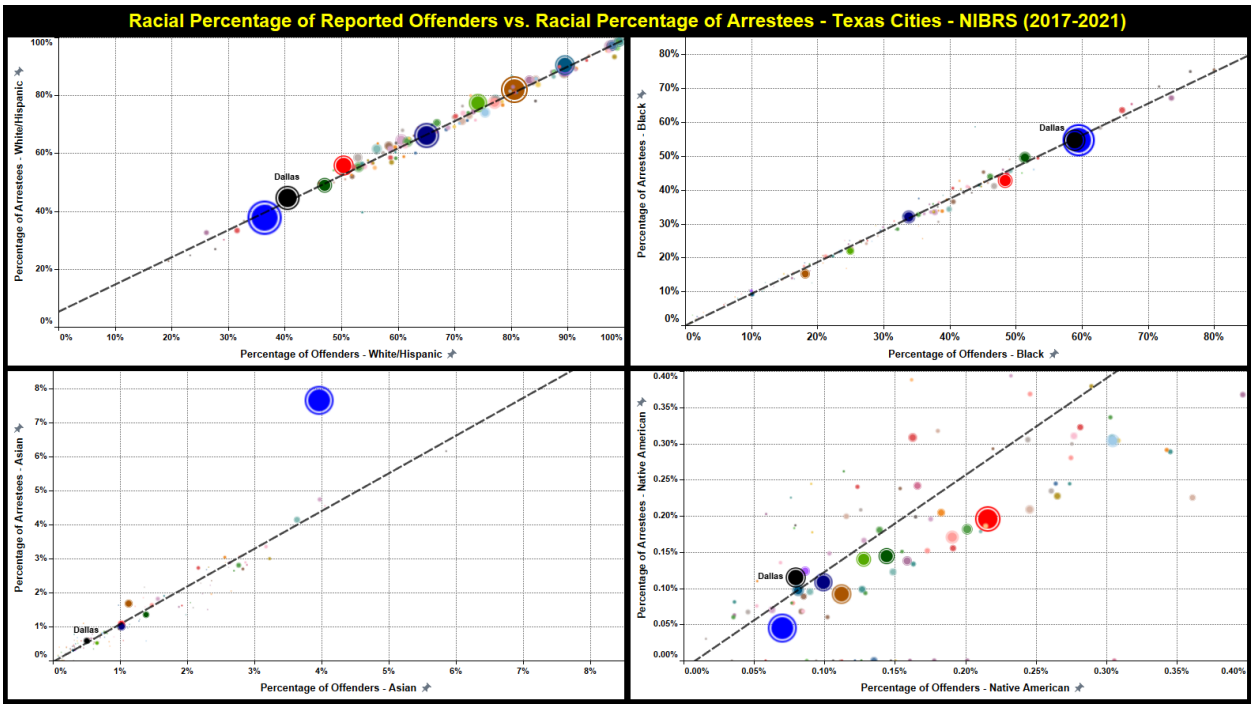
When statistical arguments are made to support claims of biased policing and racial profiling, the claims are normally based on racial disparities between stops and arrests and the residential population. In order for this analysis to be valid, we must assume that the offending behavior is the same across all demographic groups (i.e. the age, race and gender of offenders must match the age, race and gender of the underlying population). When NIBRS reported offender data is compared with the residential population, it is clear that offending behavior is not the same across all demographic groups. Males are more likely to be reported offenders than Females and individuals between 18 and 29 are more likely to offend than juveniles and older individuals.

The graphs above compare the racial composition of reported offenders with the racial makeup of the residential population in each city. If the offending population matched the population, then the city would appear on the blue trend line (e.g. 10% of offenders were Black and 10% of the population is Black so there is no disparity). If a city falls above the blue line, then residents of that racial group are more likely to be reported as an offender than their population would suggest. Similarly, cities that fall below the blue line have racial groups that are underrepresented in reported offenders.

In general, Hispanic residents are reported as offenders in proportion to their population. In Sugarland, Richardson and Lubbock, Hispanic residents are more than 30% more likely to be reported as an offender, and in Houston, Dallas and Arlington, Hispanic residents are about 30% less likely to be reported as a crime suspect. Black residents are generally 80% more likely to be reported as an offender than their population would suggest. In Houston, Dallas, and Fort Worth Black residents are more than twice as likely to be reported as an offender and in Sugarland, College Station, Austin, and Plano, Black residents are more than four times more likely to be reported as an offender. Asian residents are about 80% less likely to be a reported offender than their population would suggest. Houston has the highest rate of Asian offenders but that is still 50% less than their population. Native Americans are generally 50% less likely to be reported as an offender. The highest disparities for Native American offenders are in Pharr, McAllen, and Sugar Land.

This analysis demonstrates that it is unrealistic to expect the demographics of law enforcement activities to match the demographics of the residential population. Officers will primarily be responding to reported crimes and so we would expect the demographics of arrests to match the demographics of reported offenders. This is shown on the following graphs.

Racial Percentages of Arrestees versus Reported Offenders – NIBRS (2018 to 2021) – Cities in Texas



When the racial composition of arrestees is compared with the racial makeup of reported offenders, we see a close correlation for White/Hispanic, Black and Asian groups. This means that officers are arresting individuals for crimes at the same rate they are being reported to the police as offenders. There is one anomaly in the data and that is for arrests of Asians in Houston. Asians make up 4.0% of offenders in Houston but account for 7.7% of all arrests. This may be due to the types of crimes being committed by Asian offenders in Houston which may be more susceptible to detection and arrest by police. For Native Americans the pattern is less clear. In general, Native Americans are about 30% more likely to be arrested than would be expected based on their share of reported offenders. This may be due to the types of crimes committed by this group which may be more susceptible to arrest.

Use of Force Data Collection from Dallas Police Department

Police Strategies LLC began working with Dallas Police Department in April 2022. Our first task was to code the Department's use of force reports and enter the data into the Police Force Analysis System℠. Dallas PD and Dallas Information and Technology Services (ITS) provided electronic extracts from those incident reports that included summaries of the incidents and officer statements. The data was shared through a secure online file sharing system.

Since 2014 Dallas PD has collected data and information on use of force incidents using their IAPro/BlueTeam™ records management system. Police Strategies LLC has a partnership with IAPro which allows us to extract raw data directly from the IAPro records management system. Dallas PD provided eight years of historical use of force data from IAPro which was incorporated into the analysis.

The data from IAPro was combined with the data extracted from the incident reports and officer narrative statements and entered into a relational database. Interactive dashboards were then built for use by Dallas PD and the public.

The Police Force Analysis System℠ contains data on all use of force incidents where an officer used a weapon and/or used any physical force. Dallas PD also provided data and reports on incidents where officers pointed a weapon (firearm, ECW[46] or projectile weapons) at a subject but the weapons were not discharged, and no other force was used. We identify these cases as "show-of-force" incidents and distinguish them from actual uses of force. Show-of-force incidents are qualitatively different from actual use of force incidents, and they cannot be analyzed using the same methodology. Therefore, this report will discuss show-of-force cases separately from use of force incidents.

The dashboards will be updated on a regular basis and annual written reports will be produced that summarize the analysis and findings. The next dashboard update will occur in the spring of 2023 using data from the first six months of 2022. Data from the remainder of 2022 will be added by the summer of 2023. At that time the dashboard updates will be made on a quarterly basis.

[46] ECW means an electronic control weapon commonly known as a Taser™.

This first report on use of force data from Dallas PD will also include an analysis of data received from the Department's IAPro systems from 2014 to 2021. Although this data is more limited that the data extracted for use in PFAS, a number of meaningful long-term trends and patterns can be identified and discussed using the IAPro data that will help provide background and context for the in-depth analysis of the use of force data from 2021.

Police Force Analysis System℠ – Summary of Use of Force Incidents for the Dallas Police Department

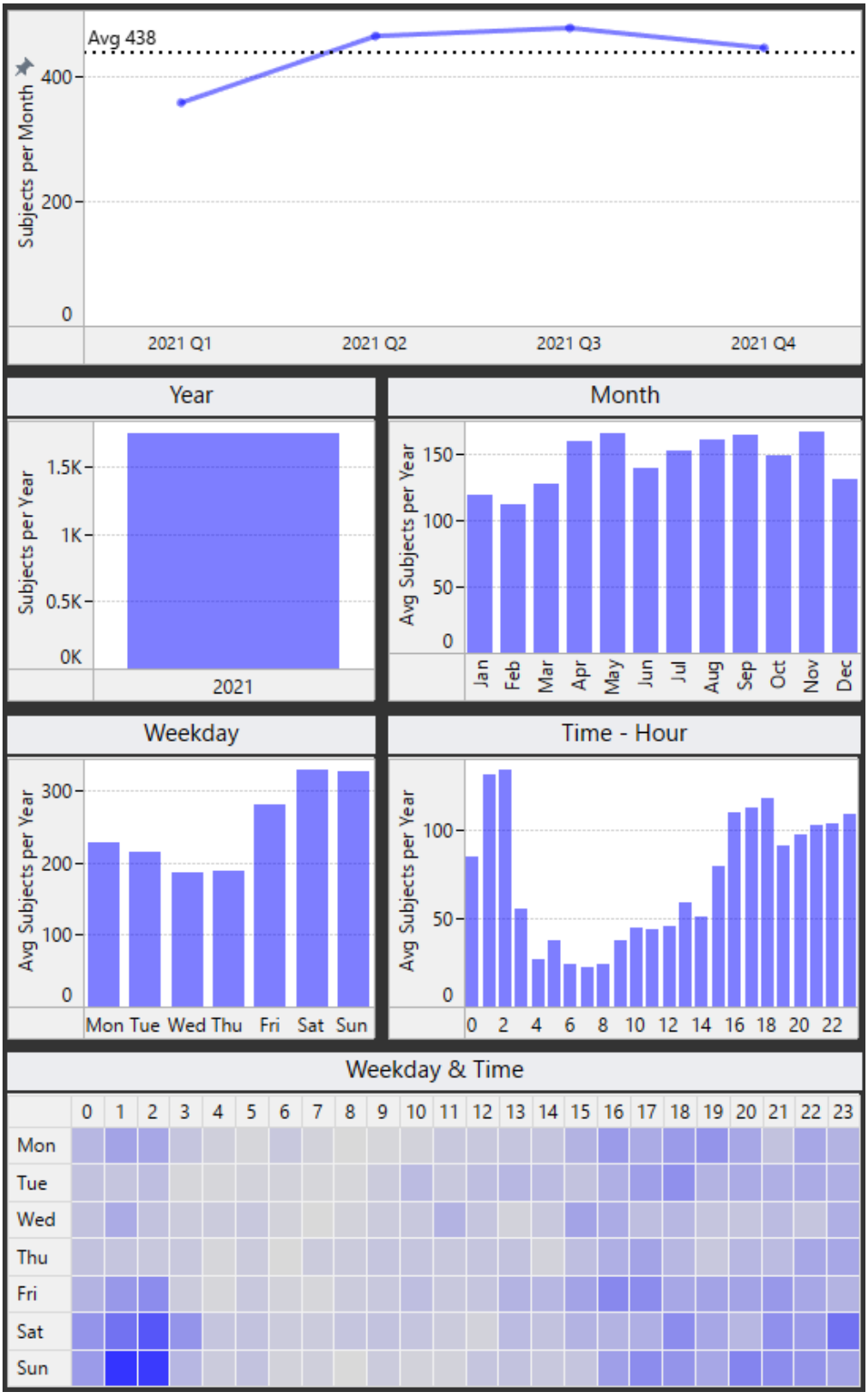
Dallas Police Department's Police Force Analysis System℠ (PFAS) contains use of force data from 2021. The system is currently being updated with data from 2022 and then will continue to be updated on a quarterly basis beginning with data from 2023. This section of the report summarizes the 2021 data on actual use of force incidents and does not include show-of-force incidents which will be summarized later in this report. The use of force data from 2021 includes detailed information on 1,751 subjects who had force used against them and the 1,209 officers who used force during the year. These officers used force a total of 3,337 times.

Date, Time, and Location of Use of Force Incidents

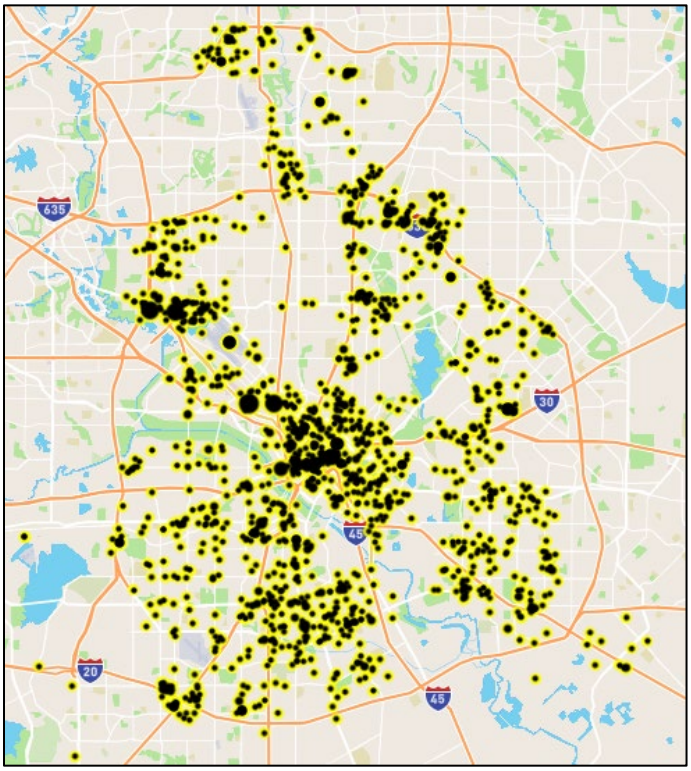
In 2021 the months with the most force incidents were November (167) and May (166) while the months with the fewest incidents were February (112) and January (119). During the week, Saturdays (327) and Sundays (326) had the most incidents while Wednesdays (186) and Thursdays (189) had the fewest. The peak hours for force incidents were between 1am and 3am (266) and between 4pm and 7pm (341). The peak hours for use of force incidents during the week are Sundays between 1am and 3am (82) and Saturdays between 1am and 3am (62).

Forty-eight percent of all force incidents occurred on the street, 22% occurred at a business, and 25% occurred inside or outside of a residence. Thirty-eight incidents occurred at a park, 37 at a medical facility and 8 at a school.

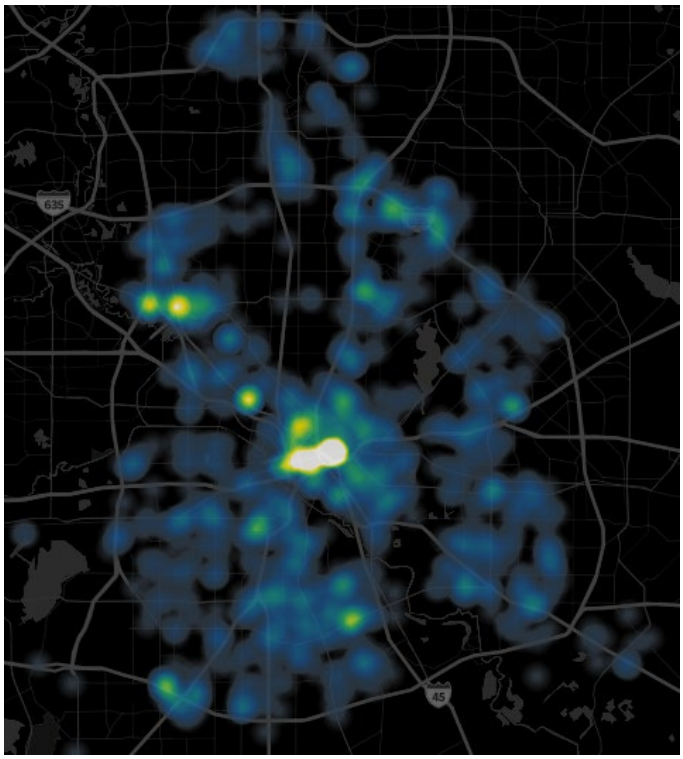
Dallas PD – Use of Force Incidents – 2021



Use of Force Incident Locations – 2021



Use of Force Heat Map – 2021



Reason for Contact

In 2021 62% of officers who used force were responding to a dispatched call for service. Twenty-nine percent of officers were making an officer-initiated contact and 9% of officers were responding to assist other officers.

The most common initial call types for force incidents were disturbance/suspicious calls (33%), violent crimes (18%) and traffic offenses (17%). In 2021 418 use of force incidents were the result of a call about a disturbance, 299 started as a traffic stop and 176 involved a welfare check. Even though the initial call type may have been for a minor offense or a welfare check, most of these incidents that involved a use of force resulted in more serious crimes being charged. For example, 25% of traffic stops where force was used involved an arrest for a warrant while another 23% involved the illegal possession of drugs or firearms. Only 4% of traffic stops where force was used involved an arrest for only a traffic offense. By contrast, 69% of welfare checks where force was used involved an individual who resisted being taken to a medical facility for a mental health evaluation or treatment.

Force Justification

The Force Justification Score is based upon the four Graham Factors: (1) seriousness of the crime being investigated; (2) the level of threat to the officer or others; (3) the level of resistance; and (4) whether the subject fled from the officer. Low Justification Scores are indicative of incidents where subjects were not committing serious crimes, did not pose a significant threat to the officer or others, did not present a high level of resistance, and did not flee. Low Force Justification scores can also be the result of inadequate report writing or insufficient information provided in the incident reports and officer narratives.

In 2021, 19% of the Department's use of force incidents (324 incidents) had low Force Justification scores (<6). The average Force Justification score was 9.8 on a scale of 0 to 20. There were 96 incidents that received the highest justification score of 20. These incidents involved an assault on the officer before the officer made the decision to use force.

In 2021 there were 417 officers who were involved in at least one incident with a low Force Justification score. One officer was involved in five low Force Justification incidents, 30 officers were involved in three or four incidents each, 75 officers were involved in two incident each, and 311 officer were involved in only one incident each with a low Force Justification score.

Low Force Justification incidents were more likely to have the following characteristics than cases with higher Force Justification scores:

	Force Justification Score	
Incident Characteristic	**Low**	**Medium & High**
Subject was female	27%	18%
Subject was White	19%	13%
Subject was under the influence of alcohol or drugs	51%	39%
Subject was charged with a liquor violation or DUI	21%	8%
Force incident was resolved within two Force Sequences	41%	25%
Subject had mental health issues	28%	16%

The average Force Justification Score was higher for Male subjects (9.9) than for Female subjects (9.4). Asian subjects (8.5) and White subjects (9.2) had lower average Force Justification Scores than Hispanic subjects (9.9) and Black subjects (9.9). By age subjects between 40 and 49 had the lowest average Force Justification score (9.1) and Juvenile subjects had the highest average score (10.4).

Force Factor

The Force Factor Score is based upon the proportionality of force to resistance and scores range from -6 to +6. A negative score means that the subject's resistance level was higher than the officers' force level. A medium Force Factor Score is between 0 and +2. This is the range where most officers can gain control of a subject by using force that is at least proportional to the level of resistance or slightly above. A Force Factor of +3 or above is considered a high score. This does not mean that the force was excessive, but these incidents do present a higher risk of being found to be excessive under the Graham v. Connor standards.

In 2021, 8% of all force incidents had a high Force Factor score (+3 or above) (142 incidents). There were 145 officers involved in at least one high Force factor incident in 2021. One officer was involved in seven high Force Factor incidents. Ten officers were involved in three to five high Force Factor incidents each and the remaining 134 officers were involved in one or two incidents each.

Average Force Factor scores were lower for Female subjects (0.1) than for Male subjects (0.6). Average Force Factor scores were highest for Asian subjects (0.8) and were lowest for Black subjects (0.4). Subjects between 30 and 49 had the highest average Force Factor score (0.6) and Juveniles had the lowest Force Factor Score (0.0).

The most common Force Factor Score was +1 (37%) followed by 0 (30%) and +2 (15%). There were 23 incidents with a +4 Force Factor score and no incidents with a higher score. Since 82% of all force incidents are between 0 and +2, this indicates that most officers in the Department behave very consistently when faced with a given level of resistance and they tend to use the minimal amount of force necessary to gain compliance.

When higher levels of force are used against lower levels of resistance, the subjects are controlled much faster with lower injury rates for officers but higher injury rates for subjects.

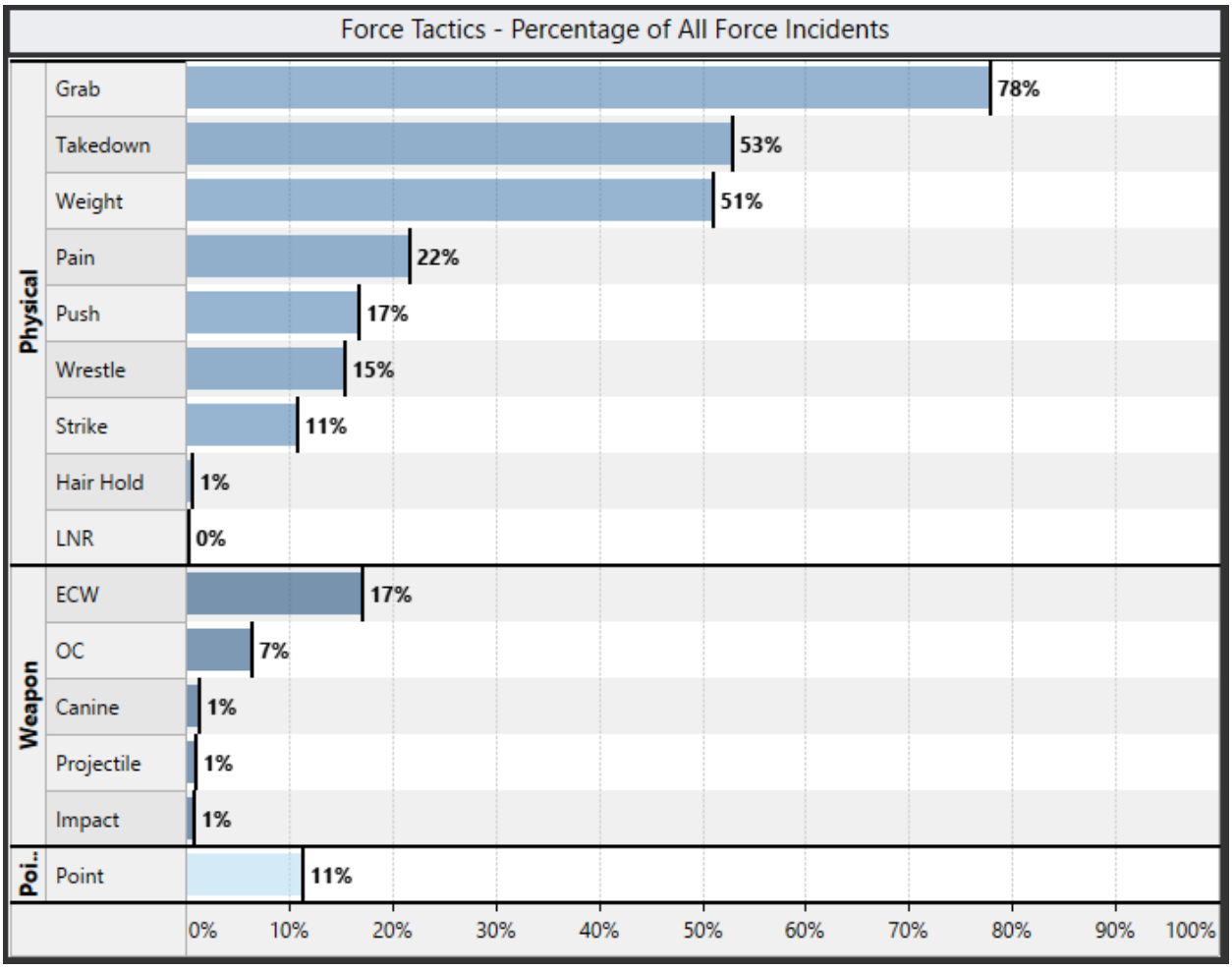
	Force Factor		
	Low (-1 to -3)	Medium (0 to +2)	High (+3 to +4)
Subject brought under control within 1 or 2 Force Sequences	19%	26%	45%
Subject Injury Rate	37%	36%	49%
Officer Injury Rate	27%	13%	4%

Force Tactics

Of the 1,751 use of force incidents that occurred in 2021, 75% involved physical force only, 9% involved only the use of weapons by officers and 16% involved both physical force and the use of a weapon.

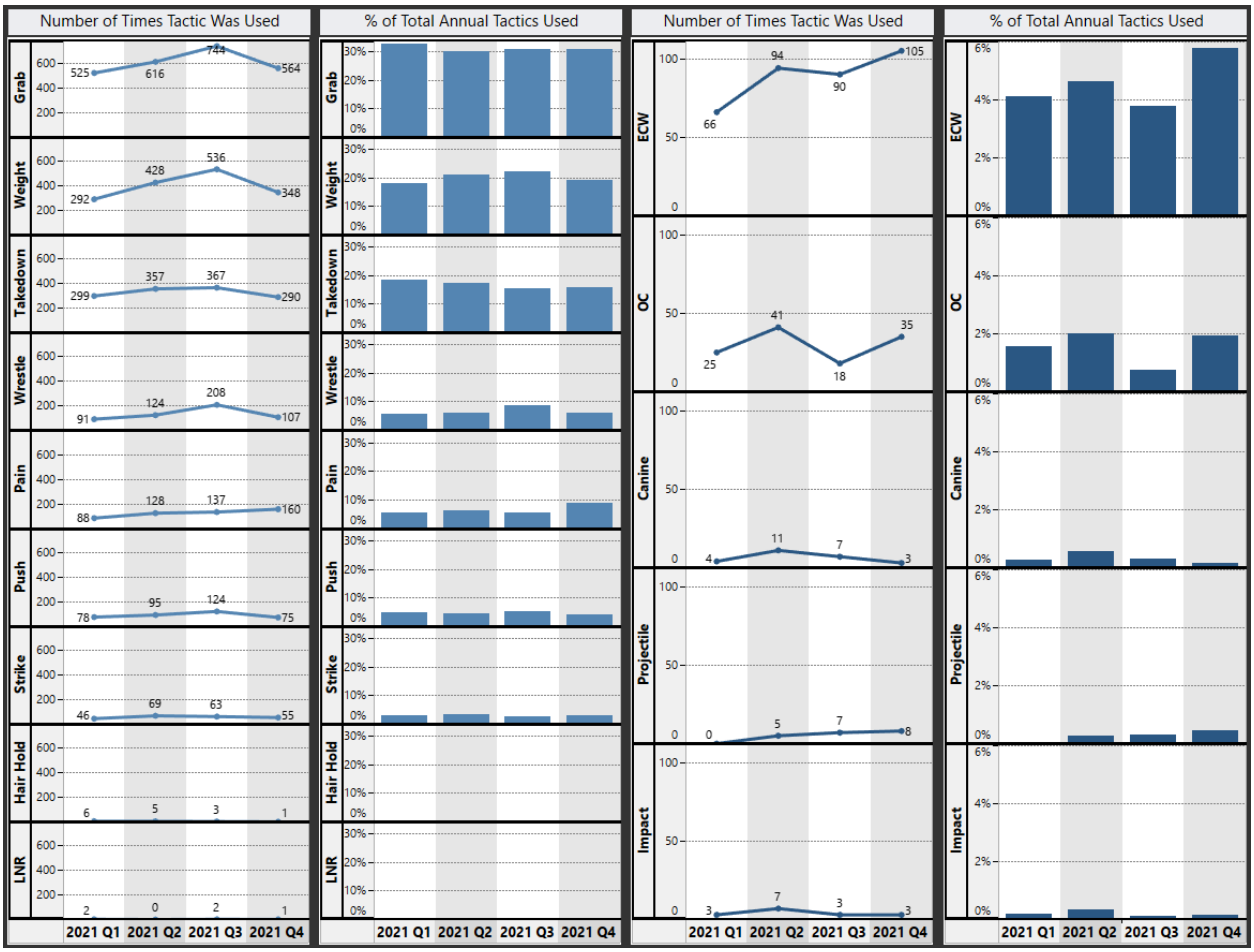
Grabbing/pulling (78%), takedowns (53%), and using weight to hold a subject down (51%) were the most common physical tactics used while ECWs (17%), OC (7%) were the most frequently used weapons.

Force Tactics Used - 2021



In 2021 officers used 7,855 individual physical force tactics and weapons during 1,751 incidents. During the year the use of takedowns decreased from 19% of all force tactics in the first quarter to 16% by the fourth quarter, while the use of pain compliance and joint manipulation techniques increased from 5% to 9% during the same time period. The use of ECW's increased from 66 in the first quarter to 105 in the fourth quarter, and the use of projectile weapons rose from zero to eight uses over the same time period.

Annual Number of Force Tactics Used - 2021



Subjects

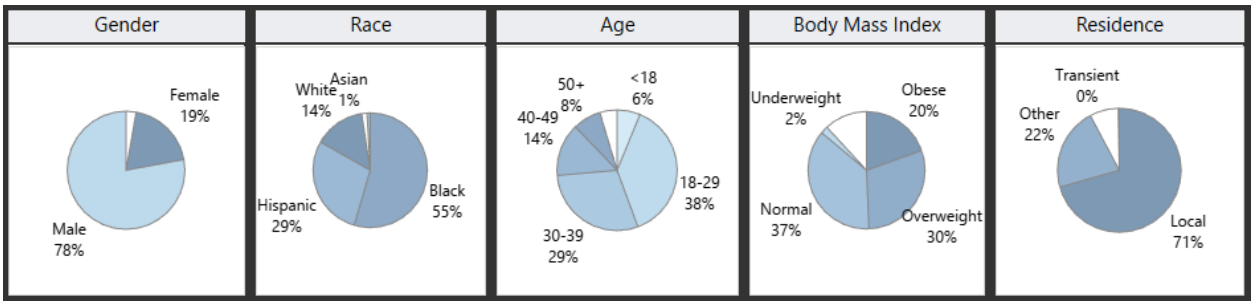
In 2021 there were three demographic groups (gender, race, and age) that made up 56% of all use of force subjects.

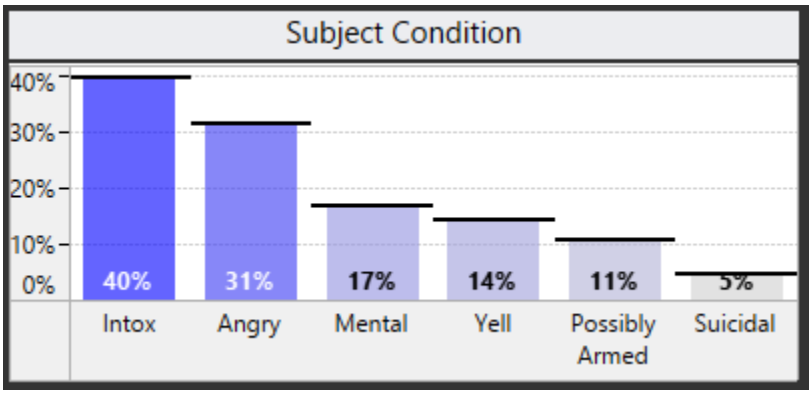
Most Common Characteristics of Use of Force Subjects 2021				
Gender	**Race**	**Age**	**Number of Subjects**	**Percentage of Force Incidents**
Male	Black	18-39	479	27%
Male	Hispanic	18-39	332	19%
Male	Black	40+	181	10%
All Other Demographic Groups or Unknown			759	44%

About four in five use of force subjects were Male and nearly three-quarters were residents of Dallas. Six percent of use of force subjects were juveniles and 8% were over 50.

Forty percent of subjects were under the influence of drugs or alcohol when force was used. Seventeen percent of subjects appeared to have mental health issues and 5% of subjects were suicidal.

Use of Force Subject Characteristics - 2021





Injuries

In 2021 there were 291 officers who were injured during force incidents. Eight of those officers were injured three times each and 32 officers were injured twice. Nine percent of force applications by officers resulted in an injury to the officer who used force. Most officer injuries were minor: 12% of injured officers complained of pain only, 56% had a bruise or a scrape, 19% received a minor, and 11% of officers were contaminated with bodily fluid. Three officers were bitten, one officer lost consciousness and two officers received a fracture or broken tooth. Two-thirds of officer injuries were to the arm or head. Most officers did not receive any medical treatment for their injuries. Fourteen percent of injured officers were treated by EMTs and 19% received treatment at a hospital.

In 2021 657 subjects who had force used against them were injured (38% of all incidents). Of the subjects who were injured, most of those injuries were minor: complaint of pain (13%), ECW probe (19%), bruise/scrape (33%) or minor cut (20%), OC spray (10%). Twenty-three subjects were bitten by canines, one subject lost consciousness, and six subjects received serious injuries.

About three-quarters of subjects who were injured or complained of injury received medical treatment. EMTs treated 34% of injured subjects and 40% were treated at a hospital. Thirty-two percent of injuries were to the subjects' torso and 30% of injuries were to the head.

Police Force Analysis System℠ – Summary of Show of Force Incidents (Weapon Pointing) for the Dallas Police Department

Dallas Police Department's Police Force Analysis System℠ (PFAS) contains data on incidents where only a show of force was involved (i.e. pointing or displaying and threatening to use a weapon). This section of the report summarizes the 2021 data on show of force incidents. In 2021 there were 382 subjects that were involved in a show of force incident. During the year 363 officers pointed their weapons a total of 626 times.

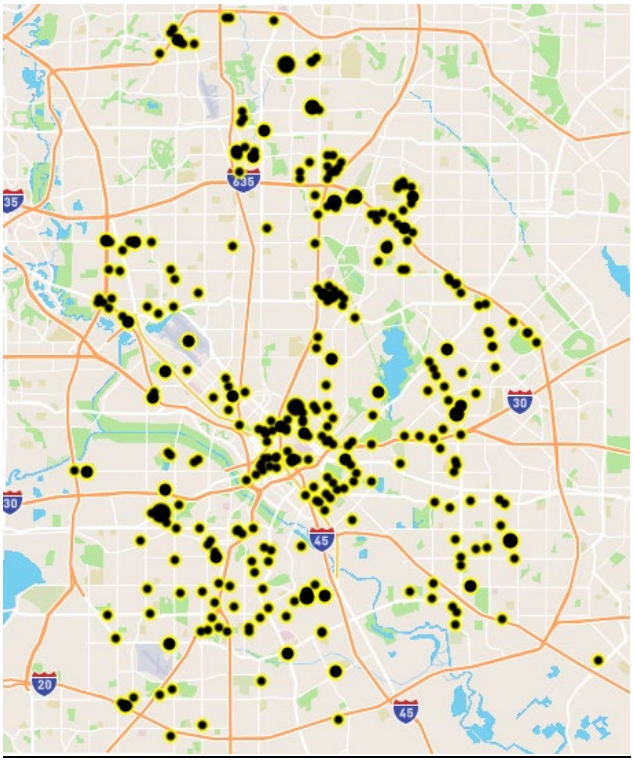
Date, Time, and Location of Use of Force Incidents

In 2021 the month with the most show of force incidents was June (43) while the month with the fewest incidents was February (23). During the week, Saturdays (75) had the most incidents while Sundays (45) had the fewest. The peak hours for force incidents were between 10pm and 11pm (35) and between 2am and 3am (31). The peak hours for use of force incidents during the week were on Saturdays between 9am and midnight (29).

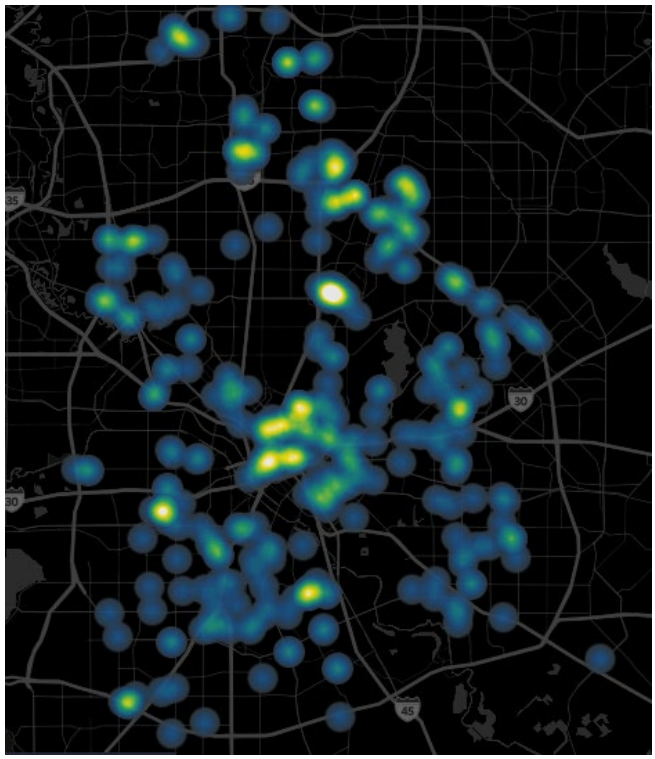
Fifty-one percent of show of force incidents occurred on the street, 14% occurred at a business, and 33% occurred inside or outside of a residence. Seven incidents occurred at a park, and one incident occurred at a medical facility.

Dallas PD – Show of Force Incidents – 2021

Show of Force Incident Locations – 2021



Show of Force Heat Map – 2021



Reason for Contact

In 2021 66% of officers who showed force were responding to a dispatched call for service. Twenty-five percent of officers were making an officer-initiated contact and 9% of officers were responding to assist other officers.

The most common initial call types for show of force incidents were violent crimes (40%), disturbance/suspicious calls (18%), property crimes (17%) and traffic offenses (17%). Only 2% of show of force incidents involved a welfare check and only 1% involved a drug crime. In 2021 91 show of force incidents were the result of a call about a firearm, 66 started as a traffic stop and 46 involved a general disturbance.

Force Frequency

In 2021 there were 382 show of force incidents involving 363 officers who showed force a total of 626 times. Each of these officers showed force an average of 1.7 times. There were nine officers who were involved in six to ten show of force incidents each and 49 officers were involved in three to five incidents each. In 2021 there were 226 officers that showed force only once. In 2021 the top 10% of officers (38 officers) made up 29% of the 363 shows of force. Since show of force incidents are directly correlated with the number of stops and arrests officers make, the officers with the highest number of show of force incidents were probably assigned to patrol and were likely making the most stops and arrests in the Department.

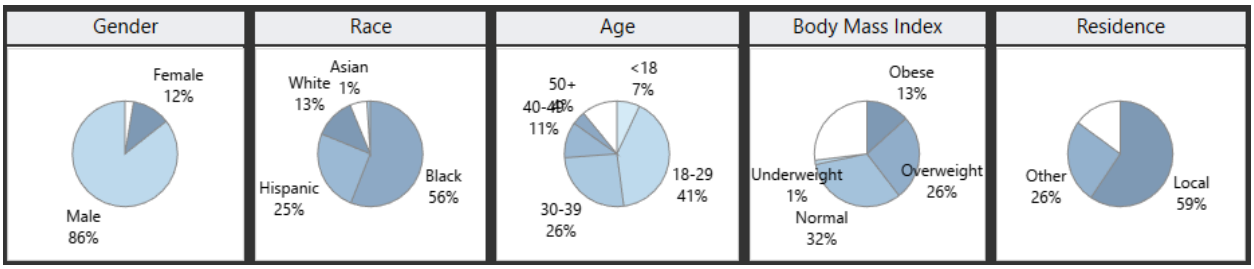
Subjects

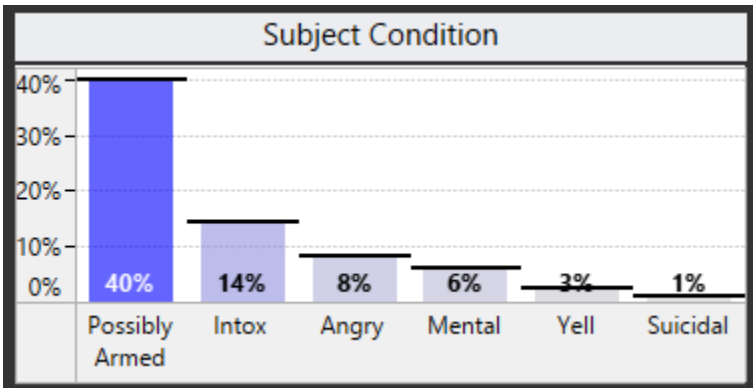
In 2021 there were three demographic groups (gender, race, and age) that made up 58% of all show of force subjects.

Most Common Characteristics of Show of Force Subjects 2021				
Gender	**Race**	**Age**	**Number of Subjects**	**Percentage of Force Incidents**
Male	Black	18-39	134	35%
Male	Hispanic	18-39	60	16%
Male	Black	40+	27	7%
All Other Demographic Groups or Unknown			161	42%

A majority of show of force subjects were Male, Black or a resident of Dallas. Two-thirds were between the ages of 18 and 39. Forty percent of show of force subjects were possibly armed and weapons were recovered from 29% of subjects including 79 firearms and 17 knives. Thirty-seven percent of show of force subjects were threatening the officer and 26 of those subjects were threatening the officer with a firearm.

Show of Force Subject Characteristics - 2021

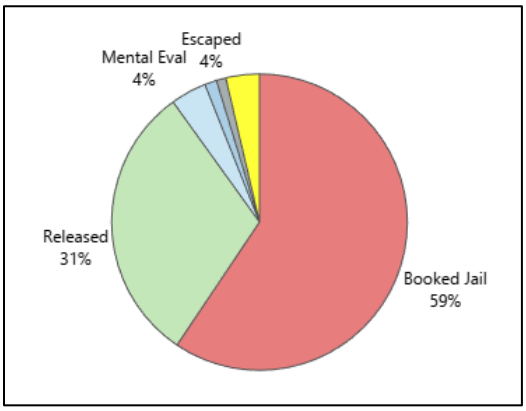




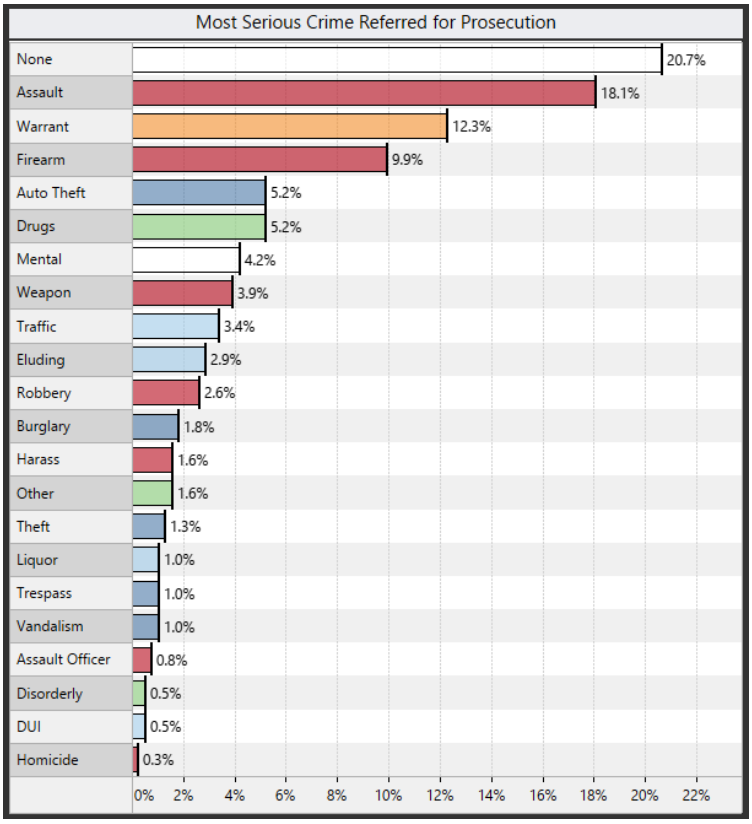
Disposition of Show of Force Incidents

Fifty-nine percent of subjects involved in a show of force incidents were booked into jail and 31% were released. Fourteen subjects escaped from officers and 20 were taken to a hospital for a medical evaluation or treatment.

Disposition of Show of Force Incidents - 2021



Most Serious Crime Charged After a Show of Force Incident - 2021



After a show of force incident 25% of subjects were not charged or were taken to a hospital for a mental health evaluation. Thirty-seven percent of subjects were charged with a violent crime, 10% were charged with a property crime and 12% were arrested on a warrant.

Interagency Comparative Analysis Using the Police Force Analysis Network℠

As a contributor of data to the Police Force Analysis System℠, Dallas PD also has access to information from other agencies in the system through the Police Force Analysis Network℠ (PFAN). PFAN currently has use of force data from ninety-one law enforcement agencies in eight states involving about 15,000 incidents and 8,000 officers who used force more than 25,000 times. This is the largest database of its kind in the nation. Although the incident reports from each of these agencies uses a different format, all the data extracted and entered into the system has been standardized which allows us to make meaningful interagency comparisons. The Police Force Analysis Network℠ allows agencies to compare their use of force practices with other agencies in the system.

This report is designed to alert the Department to potentially high-risk areas that may need improvement as well as areas where the Department is performing with low levels of risk. A high-risk score does not necessarily mean that there is a problem that needs to be addressed and for that reason this report does not recommend any specific corrective actions. Instead, the annual use of force reports and comparative dashboards will allow the Department to focus more attention on higher risk areas and determine whether any adjustments to policies, procedures or training programs are warranted. Similarly, a low-risk score does not mean that there are no issues that need to be addressed. Departments are encouraged to continue to conduct individual force reviews and use the dashboard systems to supplement and enhance those reviews to identify issues that might not otherwise be uncovered. The system will also help to highlight those areas where the Department is performing well and will help to maintain those performance levels.

1) Risk Factor Comparisons

PFAN provides a comprehensive comparative risk analysis of relevant factors involved in use of force incidents. The primary risk areas are:

1. Frequency of Force – The more uses of force an agency has the greater the risk of injuries, complaints and lawsuits resulting from these incidents.
2. Graham v. Connor - Force Justification and Force Factor Scores – Force incidents with low Force Justification Scores are at higher risk of being found to be unnecessary while incidents with high Force Factor Scores are at higher risk of being found to be excessive.
3. Force Speed and Duration – The speed of the officer's decision to use force as well as the duration of the force incident are both measured. The faster the force incident occurs the less opportunity there is for de-escalation. The longer a force incident lasts the greater the risk of injury to both officers and subjects.
4. Injury Rates – Higher injury rates pose risks to the health and safety of officers and subjects and are more likely to generate complaints and lawsuits.

The following risk rankings are based upon a comparison with the 100+ agencies currently in the Police Force Analysis Network℠. "Lower Risk" scores are more than one standard deviation below the mean. "Higher Risk" scores are more than one standard deviation above the mean. "Medium Risk" scores are within one standard deviation of the mean.

Higher Risk Medium Risk Lower Risk

Risk Level	Risk Type	Metric	Value	Interagency Comparison
🟡	Force Frequency	Uses of force per 1,000 population	1.4	Above Average
🟡	Force Frequency	Use of force rate per 100 calls for service	0.09%	Average
🟡	Force Frequency	Use of force rate per 100 arrests	4.8%	Average
🟡	Force Frequency	Percentage of officers in the department using force annually	39%	Average
🔴	Force Frequency	Average annual uses of force per officer using force	2.8	High
🟡	Graham v Connor	Percentage of incidents with low Force Justification Scores	19%	Average
🟡	Graham v Connor	Percentage of incidents with high Force Factor Scores	8.1%	Above Average
🟡	Graham v Connor	Percentage of incidents with both low Justification and high Force Factor scores	2.2%	Average
🟡	Force Speed / Duration	Percentage of incidents with 5 or 6 Force Sequences	26%	Average
🟡	Force Speed / Duration	Percentage of incidents where the Speed of Force was immediate	46%	Average
🟡	Injury	Subject injury rate	38%	Average
🟡	Injury	Subject severity of injuries	2.1	Average
🟡	Injury	Subject medical treatment rate	74%	Average
🟡	Injury	Officer injury rate per incident	14%	Above Average
🟡	Injury	Officer severity of injuries	2.3	Average

Dallas PD was within one standard deviation of the mean for fourteen of the fifteen risk metrics. The Department was one standard deviation above the mean for the average annual uses of force per officer using force. This may be due to officers in specialized units who are being called to incidents to their tactical weapons and/or having officers in high crime areas who are making a high number of arrests. Dallas PD was above average in use of force per 1,000 population. This metric will be driven by the crime rates in the city. Since Dallas PD's use of force rate per arrest and rater per calls for service is in the average range, this higher force rate per population does not indicate that Dallas PD are more likely to use force in similar situations than other agencies are. Dallas PD was above average for incidents with high force factor scores. This indicates that DPD officers use slightly higher levels of force compared to resistance than other agencies. Dallas PD was also above average for officer injury rates which indicates that DPD officers may be facing more dangerous and aggressive resisting subjects than other agencies.

2) Force Tactics Comparisons

PFAN contains data on all the physical force tactics and weapons that officers use. The system allows department wide usage rates to be compared across agencies. The following tables list the usage rates for weapons and physical tactics by Dallas PD officers and then compares those rates with the averages from other agencies in the Network.

Compared to other agencies in the Network, Dallas PD officers are less likely to use an ECW or OC. Dallas PD officers are much more likely to use weight to hold a subject down and to get into protracted physical struggles with subjects (i.e. Wrestle). This also explains why the Department also has a high percentage of long Force Sequences. When officers get into a protracted physical struggle with subjects it will take more Force Sequences to control the subjects.

Dallas PD officers were more likely than other agencies in the Network to use OC and to use the officer's weight to hold the subject down. Dallas PD officers were less likely than other agencies to use hair holds or neck restraints.

Weapon	Dallas PD Percentage of Incidents Used	Interagency Average	Interagency Comparison
Electronic Control Weapon	17%	24%	Average
Canine Bite	1.4%	2.9%	Average
OC	6.5%	2.5%	Above Average
Impact Weapon	0.9%	2.4%	Average
Projectile Weapon	1.0%	0.9%	Average

Physical Tactic	Dallas PD Percentage of Incidents Used	Interagency Average	Interagency Comparison
Grab/Hold/Pull	78%	81%	Average
Takedown	53%	54%	Average
Used Weight	51%	33%	Above Average
Pain Compliance	22%	24%	Average
Wrestle	15%	20%	Average
Push	17%	18%	Average
Strike	11%	11%	Average
Hair Hold	0.7%	3.1%	Below Average
Lateral Neck Restraint	0.3%	2.2%	Below Average

All Force Tactics Used	Dallas PD Percentage of Incidents Used	Interagency Average	Interagency Comparison
Only Physical Tactics Used	75%	68%	Average
Both Physical Tactics and Weapons Used	16%	23%	Average
Only Weapons Used	9%	9%	Average

3) Subject Injury Rate Comparisons

Compared to other agencies, Dallas PD's subject injury rates were in the average range except for chemical injuries from OC injuries which were one standard deviation above the mean. This is because Dallas PD officers use OC at a higher rate than most other agencies. Very few subjects were rendered unconscious or received a fracture when Dallas PD officers used force compared to other agencies.

Minor Injury	Subjects Injured	Interagency Average	Interagency Comparison
Complaint Only	5%	3%	Average
ECW Probe	7%	9%	Average
Bruise or Scrape	13%	13%	Average
Cut or Bleeding	8%	10%	Average
Chemical	3.6%	1.1%	High

Serious Injury	Subjects Injured	Interagency Average	Interagency Comparison
Canine Bite	1.3%	2.4%	Average
Unconscious	0.1%	0.6%	Low
Fracture (including teeth)	0.2%	0.6%	Low

4) Force Justification Components

Compared to other agencies, Dallas PD officers faced subject conditions that were in the average range.

Force Justification Component	Dallas PD Average Score	Interagency Average Score	Interagency Comparison
Subject Resistance	3.5	3.5	Average
Crime Investigated	2.8	2.7	Average
Subject Threat	1.4	1.5	Average
Subject Flight	1.3	1.1	Average

5) Other Force Characteristics

The following table lists those force characteristics which are significantly different in Dallas PD compared with the other agencies in the Police Force Analysis Network℠. These are simply descriptive measures and are not necessarily associated with increased risk.

Characteristics of Force Incidents that are **More Common** in Dallas PD than Other Jurisdictions	Characteristics of Force Incidents that are **Less Common** in Dallas PD than Other Jurisdictions
Officer(s) initiated contact	Contact was the result of a dispatched call
Three or more officers used force	Only one officer used force
Subject possessed a firearm	Subject possessed a knife
Subject was a resident of the jurisdiction	Subject was a transient
Officers responded to a disturbance	Officers responded to a violent crime
Subject fled from officers	Subject did not flee
Subject was arrested on a warrant	Subject was arrested for obstructing
Use of force occurred on the street	Use of force occurred in a residence or at a school
Original call type was a property crime or disturbance	Original call type was a welfare check or traffic stop

Long Term Use of Force Trends - Dallas Police Department

Currently one year's worth of data from 2021 has been entered into the Police Force Analysis System℠. This data contains 150 variables of information on every essential aspect of each use of force incident. This level of detail is necessary in order to be able to conduct a full risk analysis under the Graham v. Connor standards. However, Dallas PD also possesses its own use of force data that is stored in the Department's IAPro/BlueTeam records management system. The Department began entering data into this system in 2014. While this data is not as detailed or comprehensive as PFAS data, we can use the data to examine long term trends and patterns in Dallas PD's use of force practices.

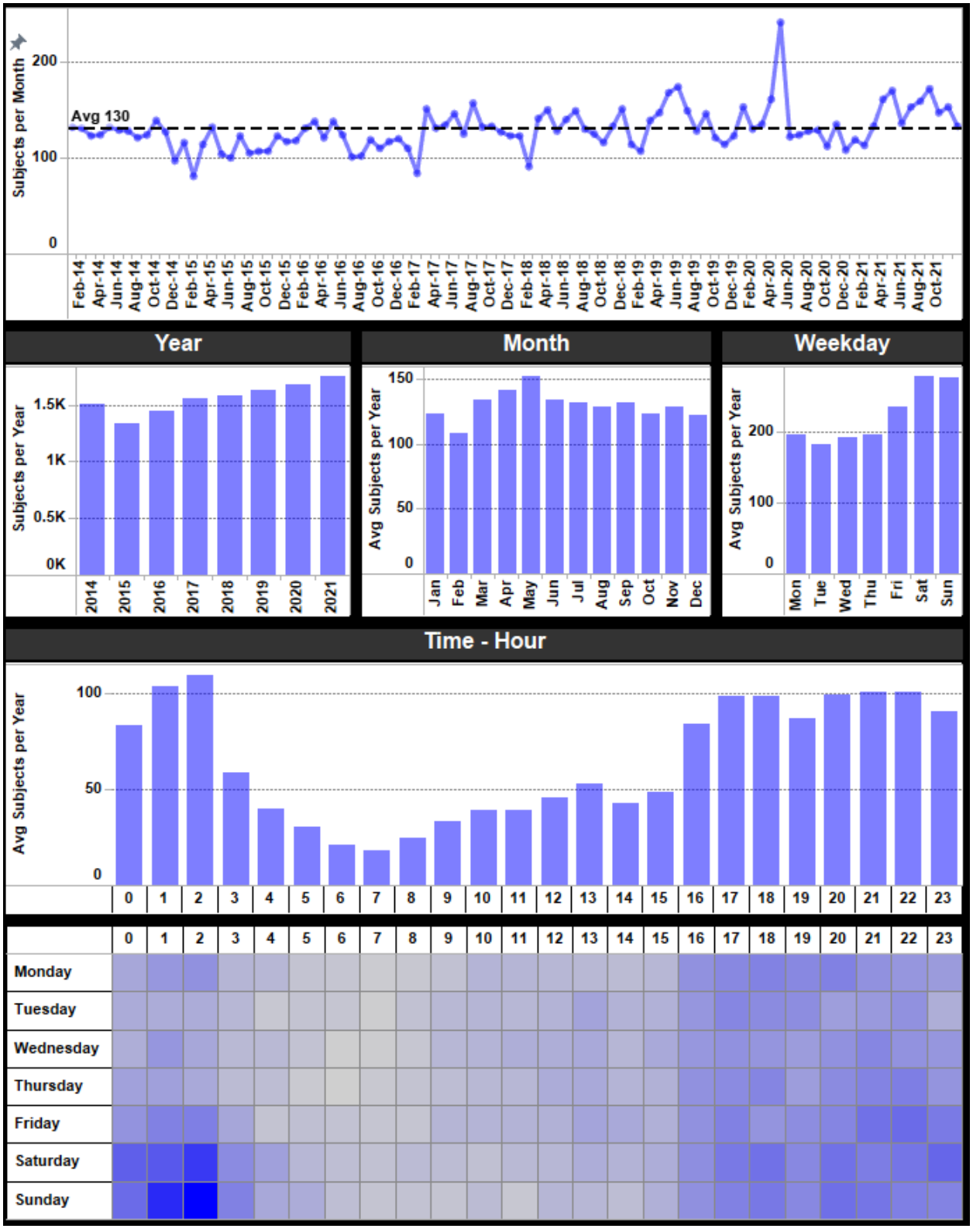
It should also be noted that there may be some minor inconsistencies in how use of force incidents are categorized in IAPro versus PFAS. For example, IAPro has 1,749 use of force incidents from 2021 while PFAS has 1,751 incidents. In this section we are only using data from IAPro.

Date, Time, and Location of Use of Force Incidents

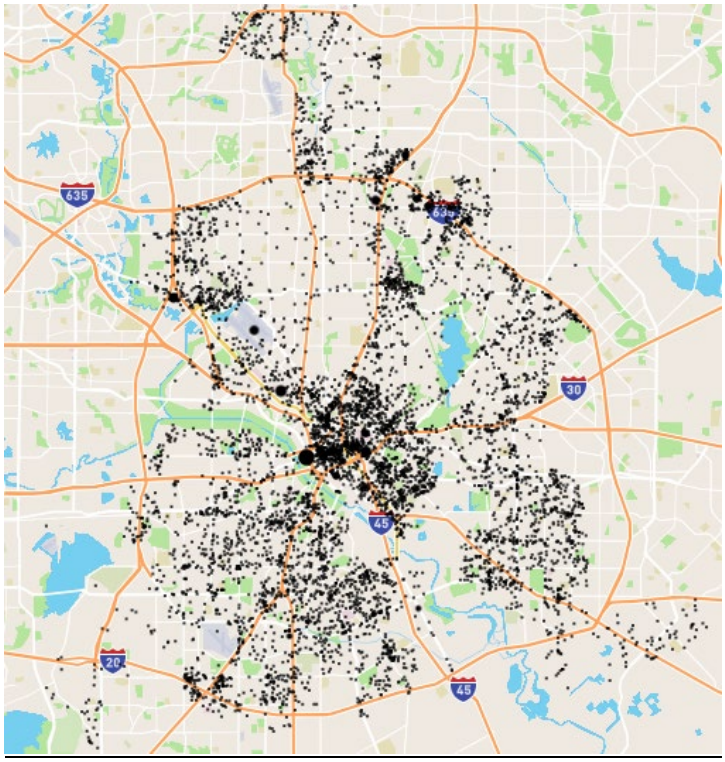
From 2014 to 2021 there were 12,462 use of force incidents involving 2,623 officers who used force a total of 17,986 times. Over the last eight years, 2015 had the fewest number of force incidents (1,329) while 2021 had 1,749. This is a 32% increase in the number of force incidents over the last seven years. On average there were 130 incidents per month, but May 2020 had 241 incidents. This was likely due to the George Floyd protests.

May had the most force incidents with 152/year while February had the fewest (109/year). Uses of force occurred more often on weekend days than weekdays. The peak hour for use of force incident was between 2am and 3am.

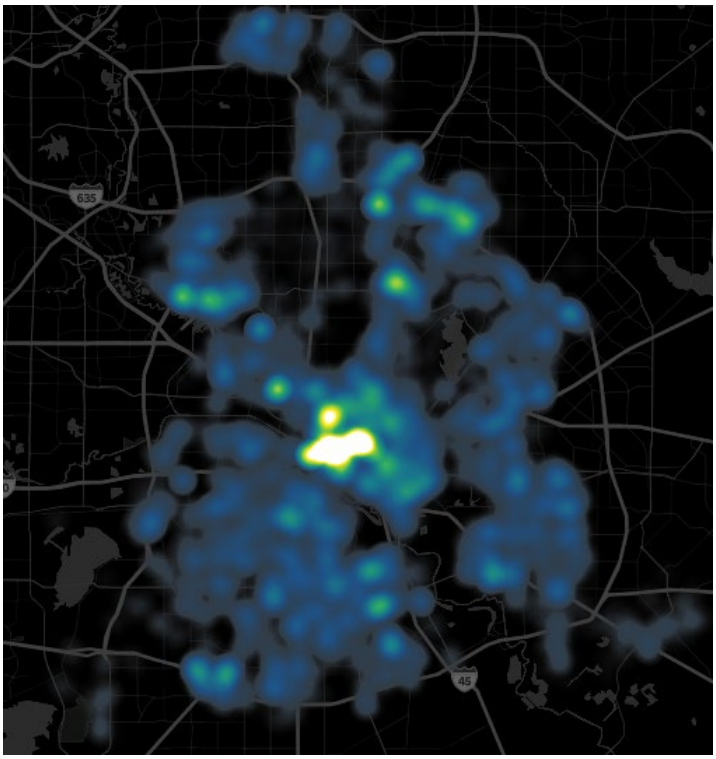
Dallas PD – Use of Force Incidents – 2014 to 2021



Use of Force Incident Locations – 2014 to 2021



Use of Force Heat Map – 2014 to 2021



Reason for Contact

In 2021 62% of officers who used force were responding to a dispatched call for service. Twenty-nine percent of officers were making an officer-initiated contact and 9% of officers were responding to assist other officers.

The most common initial call types for force incidents were disturbance/suspicious calls (33%), violent crimes (18%) and traffic offenses (17%). In 2021 418 use of force incidents were the result of a call about a disturbance, 299 started as a traffic stop and 176 involved a welfare check. Even though the initial call type may have been for a minor offense or a welfare check, most of these incidents that involved a use of force resulted in more serious crimes being charged. For example, 25% of traffic stops where force was used involved an arrest for a warrant while another 23% involved the illegal possession of drugs or firearms. Only 4% of traffic stops where force was used involved an arrest for only a traffic offense. By contrast, 69% of welfare checks where force was used involved an individual who resisted being taken to a medical facility for a mental health evaluation or treatment.

Force Frequency

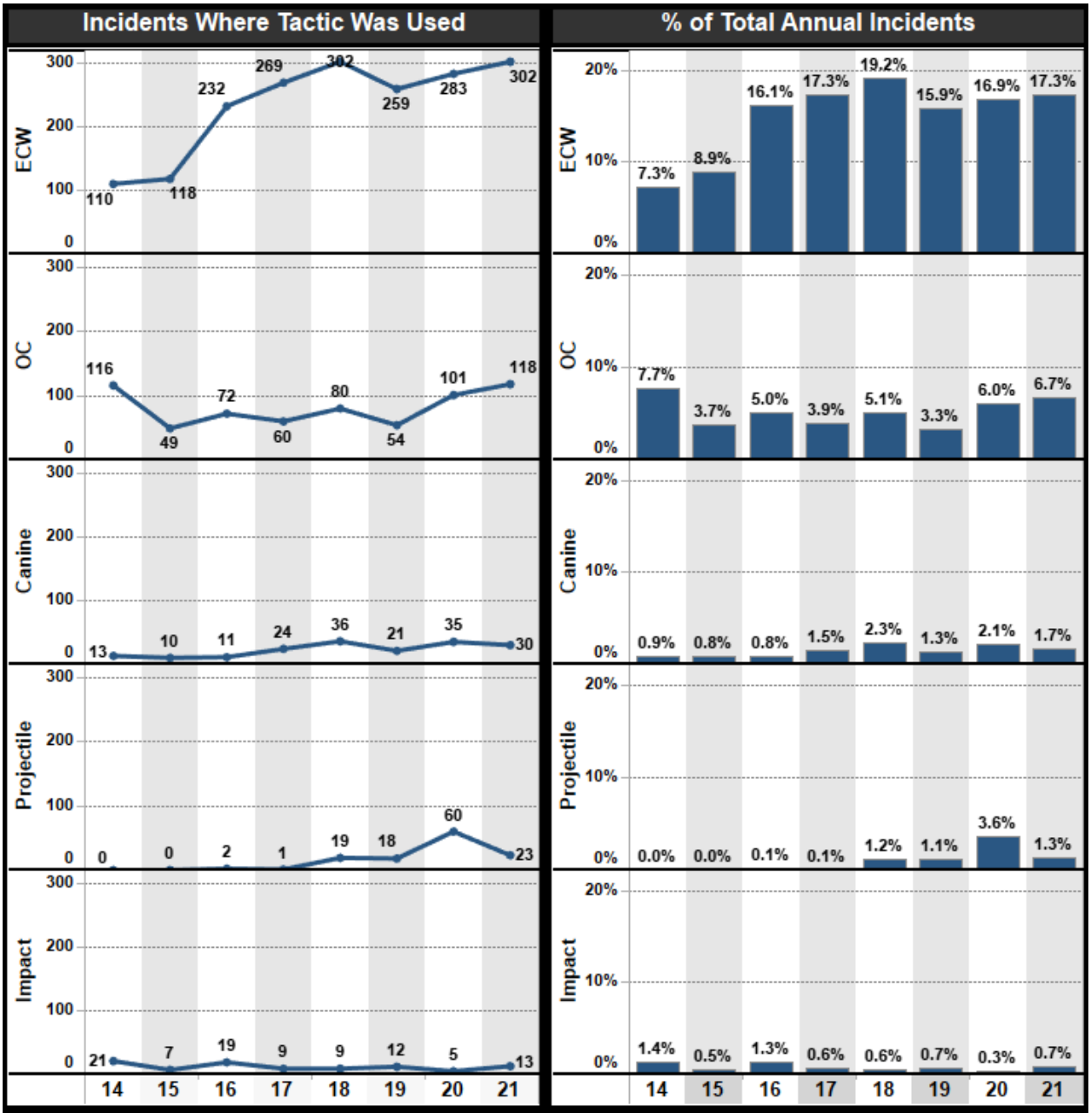
From 2014 to 2021 there were 12,462 use of force incidents involving 2,623 officers who used force a total of 17,986 times. The officers involved in use of force incidents over the 8-year period averaged a total of seven incidents each. No officer averaged more than 15 uses of force per year.

Over the last eight years, the top 10% of officers (262 officers) were responsible for 25% of the 17,986 uses of force.

Force Tactics

The IAPro/BlueTeam system has a basic method for capturing information on physical force tactics, but officers do not consistently report on the types of physical force used. By contrast, the data on the use of weapons is more reliable and therefore we can examine trends over the last eight years.

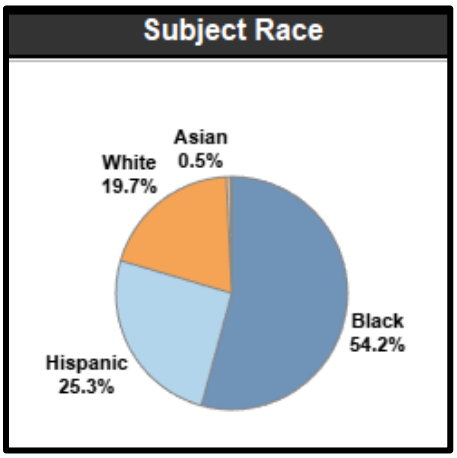
Annual Number of Force Tactics Used – 2014 to 2021

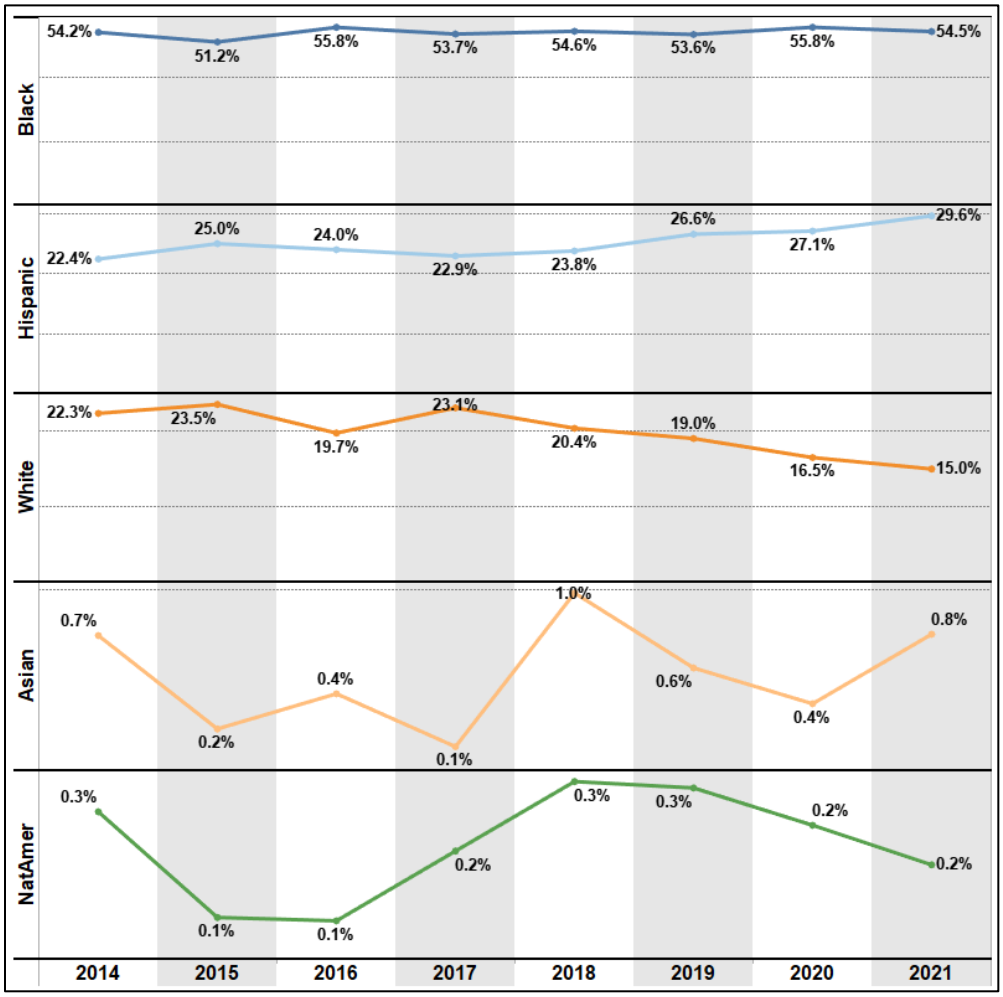


The use of Electronic Control Weapons (ECW) has increased from 7% of force incidents in 2014 to 17% in 2021. ECW use has remained fairly constant from 2016 to 2021. The use of OC has varied between 3% of incidents in 2019 to 8% of incidents in 2014. Canine use has hovered between 1% and 2% of all force incidents. Projectile weapons came into regular use in 2018 and were involved in 1.2% of incidents before climbing to 3.6% in 2020. This peak was likely due to use during the George Floyd demonstrations. The use of impact weapons is rare and has been involved in less than 1% of force incidents since 2017.

Subject Trends

Subject Race – 2014 to 2021

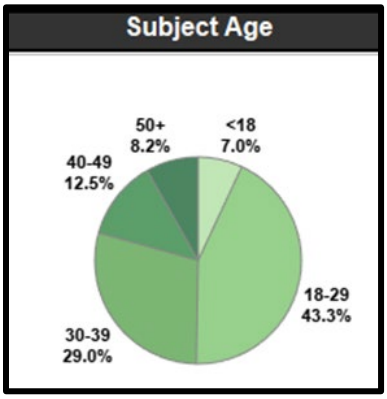


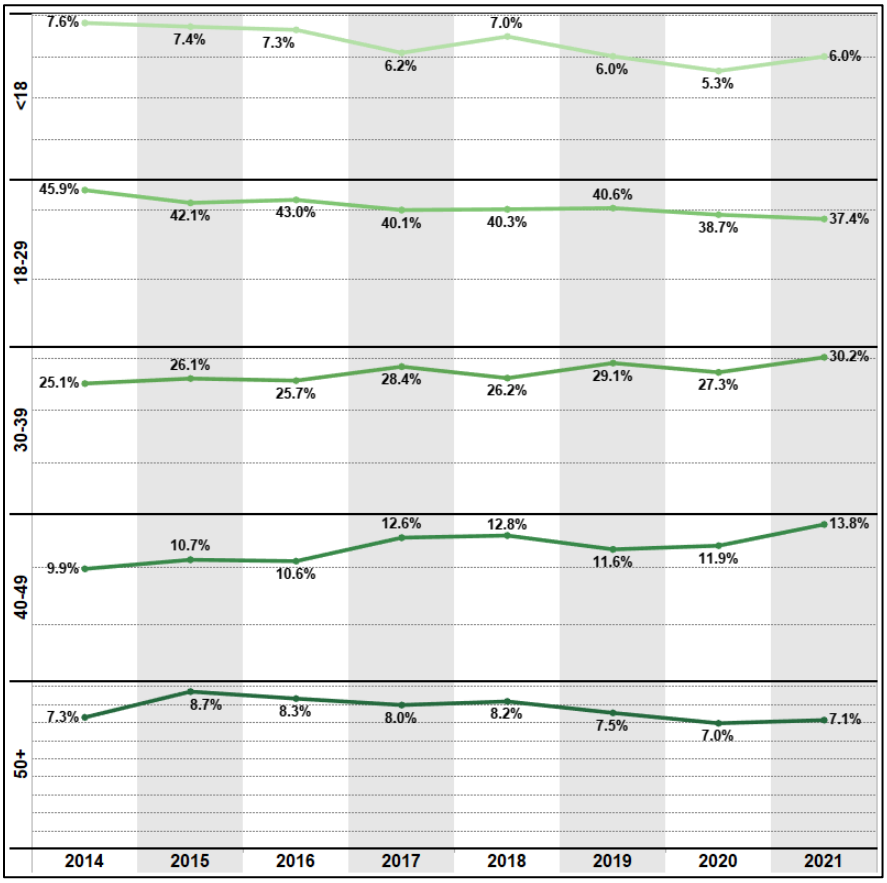


The percentage of Black subjects involved in use of force incidents remained fairly stable at 54%. Hispanic subjects increased from 22% in 2014 to 30% in 2021 while the percentage of White subjects fell from 22% to 15% in the same time period. Over the last eight years, the percentage of Asian subjects remained under 1% and the percentage of Native American subjects never rose above 0.3%.

The changes in the percentages of White and Hispanic subjects over time may be due to the changing demographics of the city, but it could also be due to different reporting requirements as well (i.e. recording White/Hispanic subjects as Hispanic rather than White).

Subject Age – 2014 to 2021

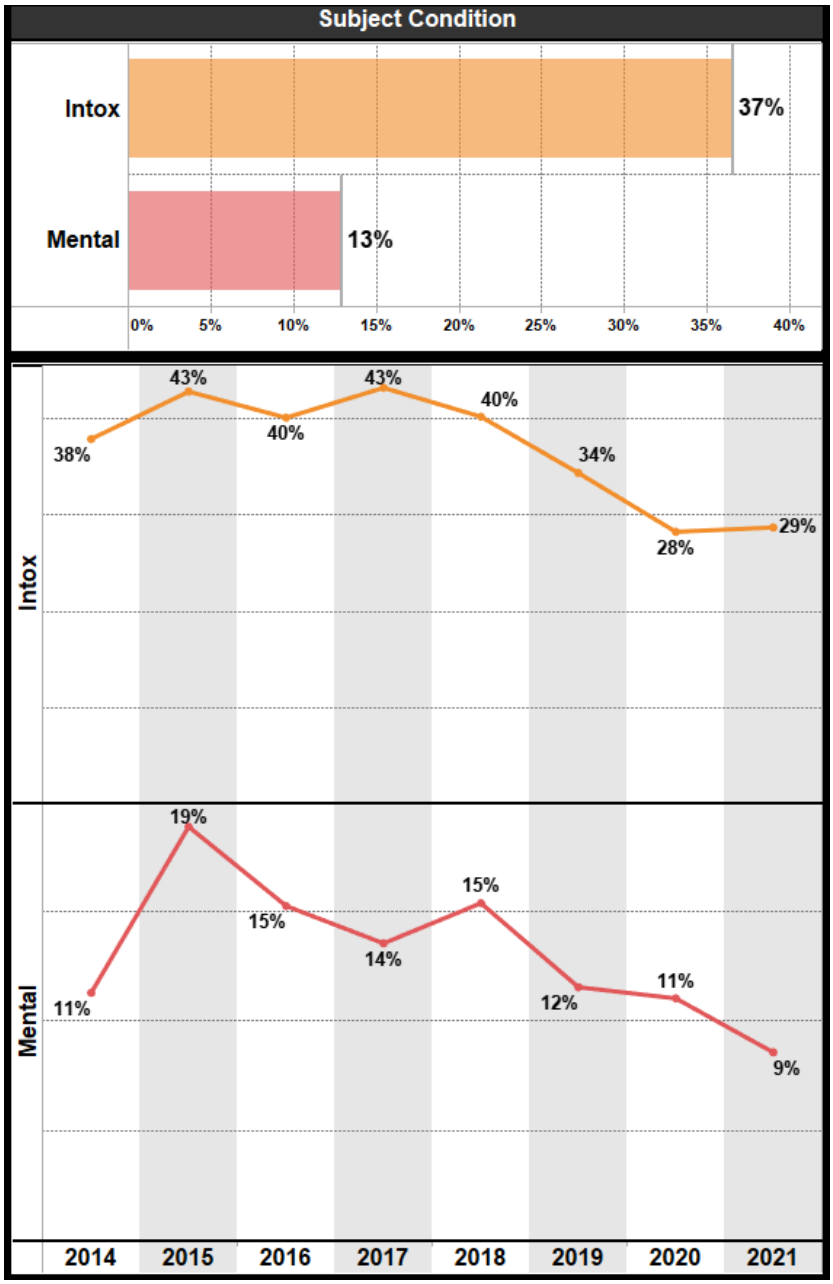




The average age of use of force subjects has increased over the last eight years. In 2014, 7.6% of use of force subjects were juveniles and by 2021 that number was down to 6.0%. Subjects between 18 and 29 fell from 46% in 2014 to 37% in 2021 while the percentage of subjects between 30 and 49 rose from 35% to 44% in the same time period.

IAPro/BlueTeam captures data on whether the subject was under the influence of alcohol or drugs and whether the subject had any mental health issues. Over the last seven years the percentage of intoxicated subjects has fallen from 43% to 29% and the percentage of subjects with mental health issues fell from 19% to 9%.

Subject Under the Influence & Mental Health – 2014 to 2021

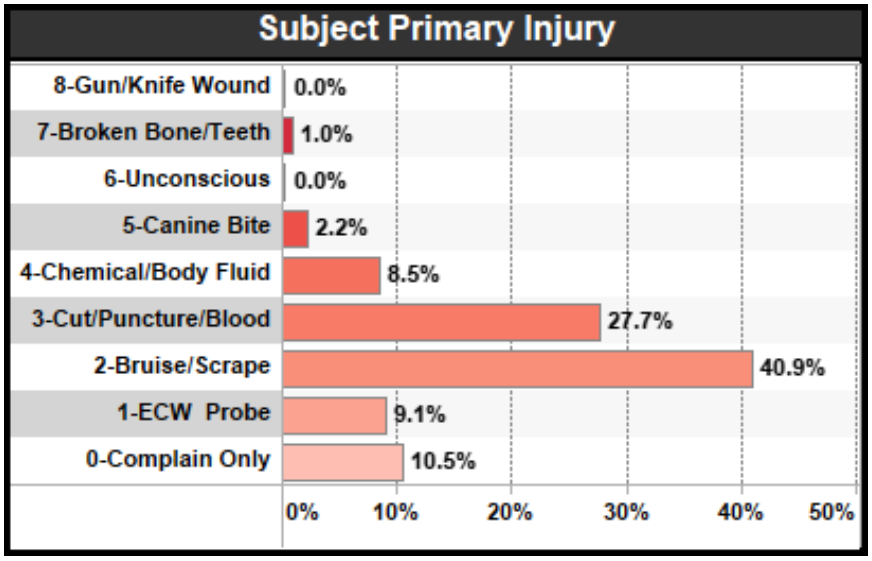


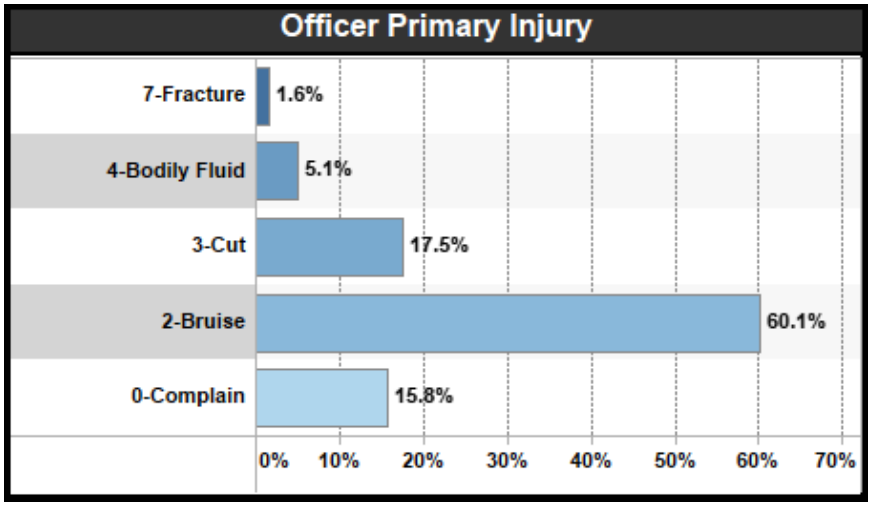
Injuries

The IAPro/BlueTeam system does a good job capturing injuries to officers and subjects during use of force incidents. Between 2014 and 2021 there were 4,618 subjects and 1,919 officers who were injured during a use of force incident. The injury rate for subjects was 37% and the injury rate for officers was 11%.

The majority of injuries to both officers and subjects were relatively minor. For subjects, 103 received a canine bite, 45 had a fracture or broken tooth, and one lost consciousness. Thirty officers suffered a fracture or broken tooth.

Injuries to Officers and Subjects – 2014 to 2021

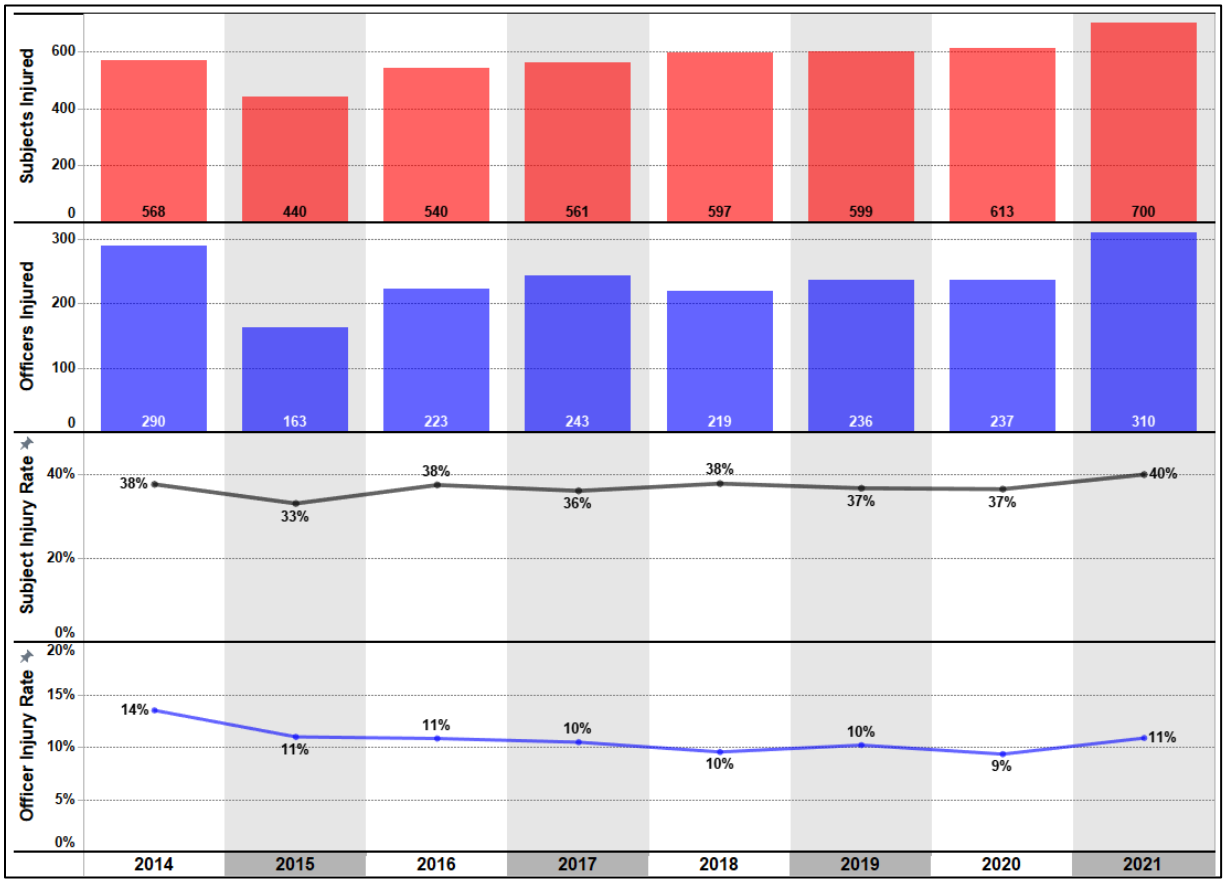




Of the 1,919 officers injured over the last eight years, five officers were injured between 11 and 13 times each. There were 68 officers who were injured between 5 and 9 times each.

Officer injury rates and subject injury rates have remained fairly stable over time.

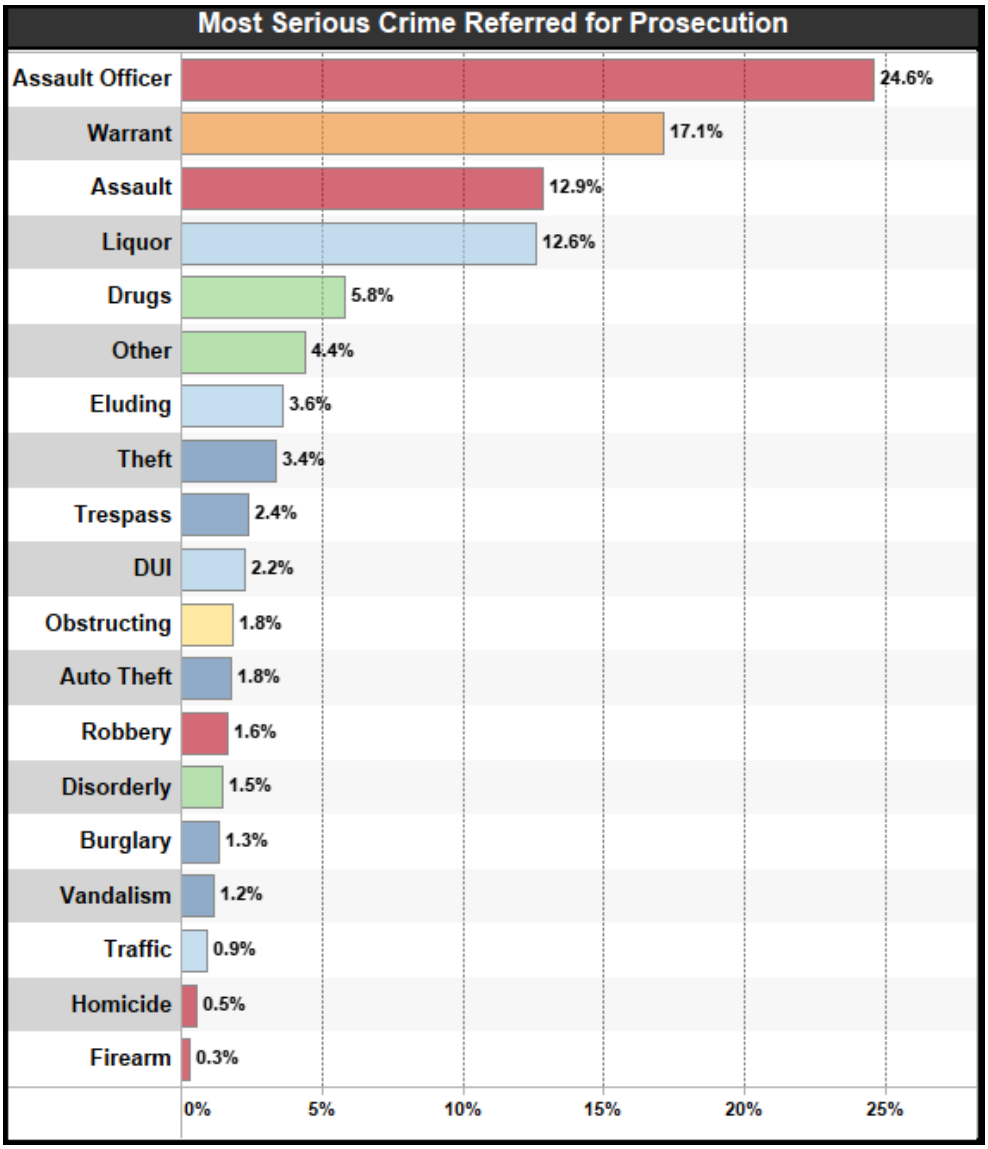
Annual Injuries to Officers and Subjects – 2014 to 2021



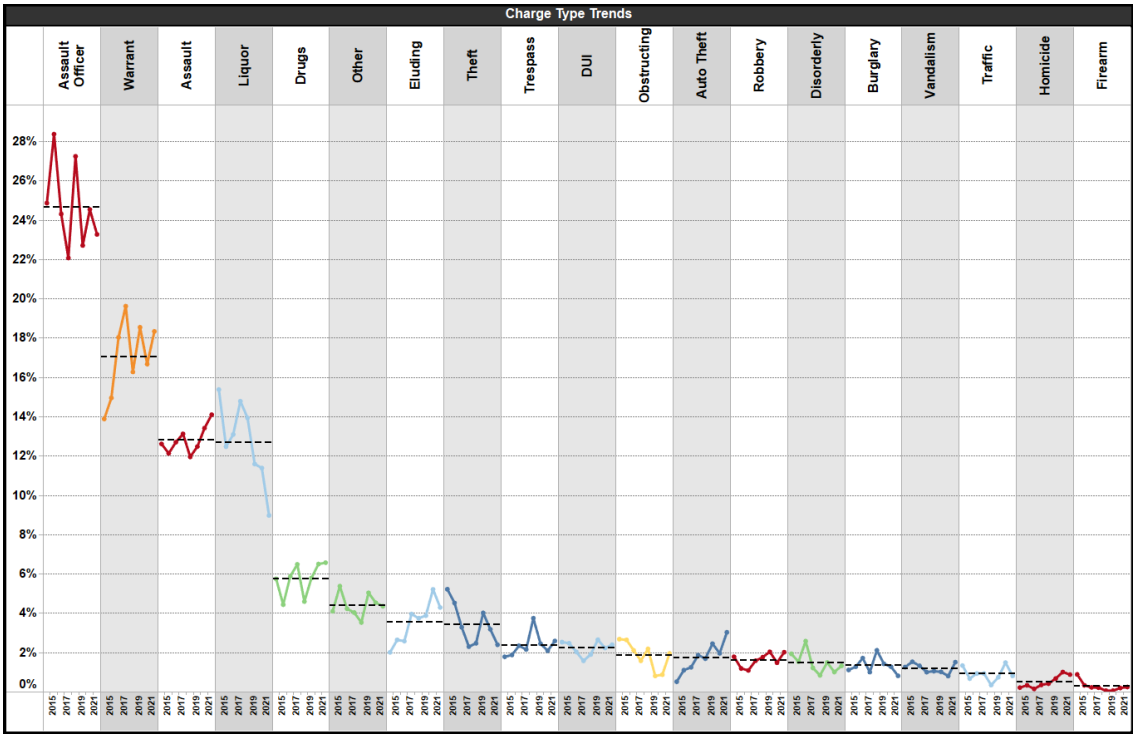
Crimes Involved

IAPro/BlueTeam captures the most serious crime that was involved in each use of force incident. Assaulting police officers was the most common crime involving one-quarter of all force incidents followed by warrant arrests (17%), other assaults (13%), and liquor offenses (13%).

Most Serious Crimes Involved in Use of Force Incidents – 2014 to 2021



Crime Trends for Use of Force Incidents – 2014 to 2021



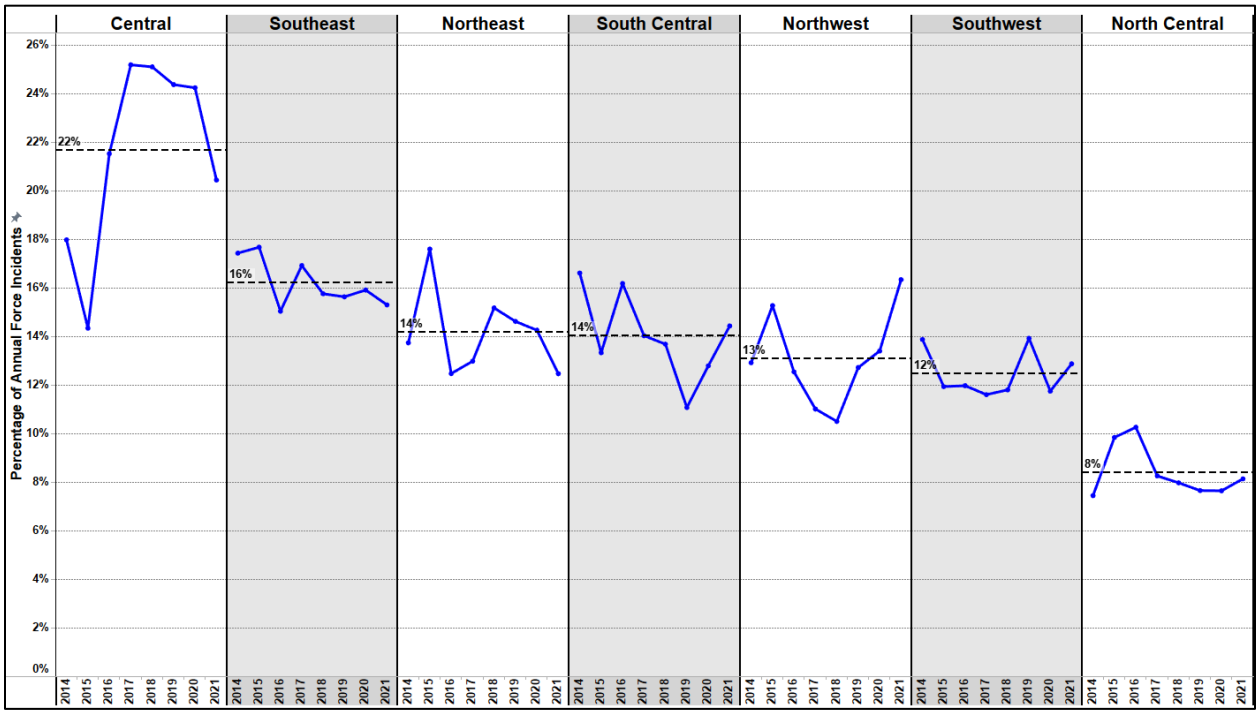
Crime Charged	% Change From 2014 to 2021	Number of Incidents in 2021
Auto Theft	481%	48
Homicide	295%	14
Eluding	113%	68
Trespass	45%	41
Warrant	32%	290
Vandalism	20%	24
Drugs	14%	104
Robbery	13%	32
Assault	12%	223
Other	6%	69
DUI	-5%	38
Assault Officer	-6%	368
Burglary	-27%	13
Obstructing	-27%	31
Disorderly	-32%	21
Traffic	-39%	13
Liquor	-42%	142
Theft	-54%	38
Firearm	-72%	4

Between 2014 and 2021 the percentage of use of force incidents involving auto theft, homicide and eluding more than doubled, while use of force incidents related to traffic stops, liquor offenses, theft and firearms dropped by more than a third.

Geographic Analysis – Use of force by Division

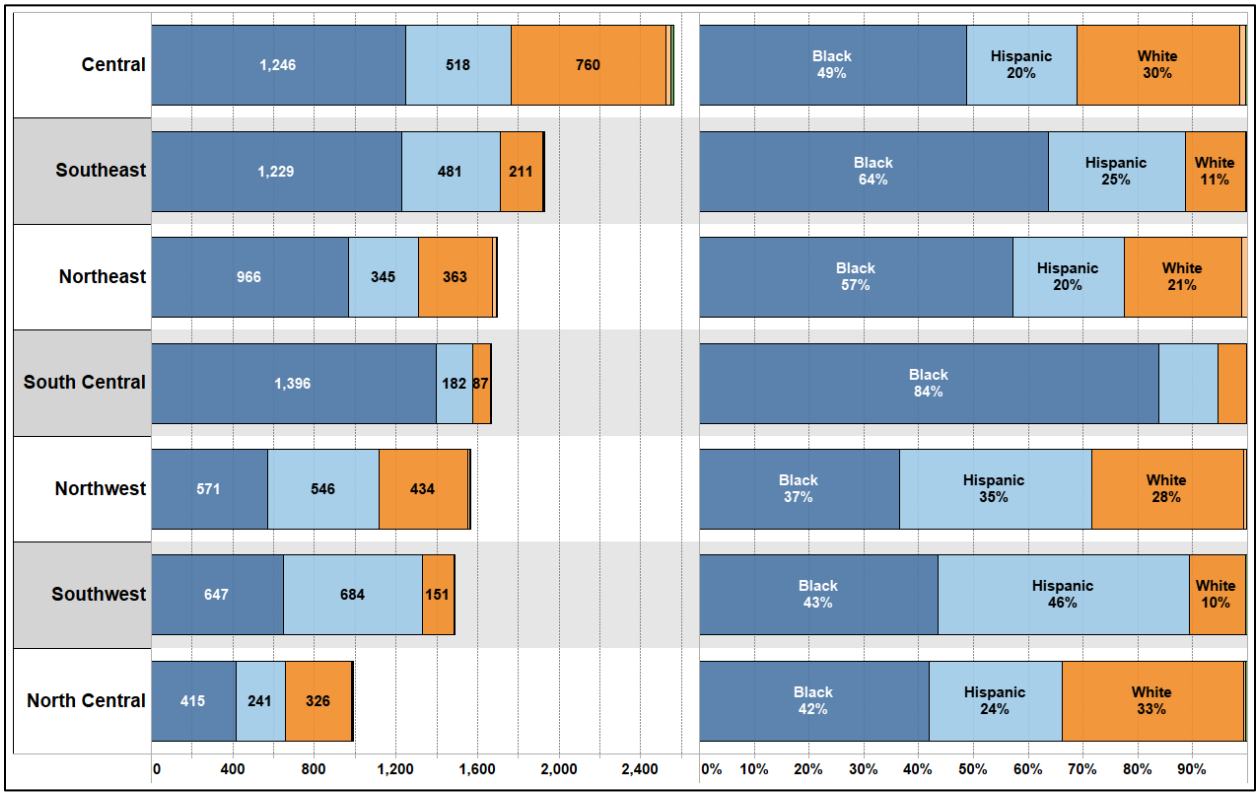
Dallas PD is divided into seven divisions. Use of force incidents are not distributed equally around the city and each Division has its own characteristics and patterns.

Use of Force Trends by Dallas PD Division – 2014 to 2021



Over the last eight years Central Division has had the most force incidents (22% of the City total) and North Central Division has had the fewest (8%). Each of the other Divisions ranges between 11% and 18% of the total use of force incidents in the city.

Racial Makeup of Use of Force Subjects by Dallas PD Division – 2014 to 2021



South Central Division has the highest percentage of Black use of force subjects (84%), while Southwest Division has the highest percentage of Hispanic subjects (46%), and the North Central Division had the highest percentage of White subjects. These differences are most likely driven by the residential population of the different neighborhoods in Dallas as well as the criminal activities in different areas of the city.

APPENDIX A - Data Sources & Statistical Methods Used

National Incident-Based Reporting System (NIBRS)[47]

The National Incident-Based Reporting System (NIBRS) has been implemented over the last few years to improve the overall quality of crime data collected by law enforcement. NIBRS captures details on each single crime incident including information on victims, known offenders, relationships between victims and offenders, arrestees, and property involved in the crimes.

Local, state, and federal law enforcement agencies collect a variety of details about each incident, including the time and location of the crime; the circumstance of the incident; the characteristics of the victim and offender (age, sex, race, and ethnicity); the victim's relationship to the offender; the involvement of weapons or drugs; property loss; and whether the crime was motivated by bias.

NIBRS records where the age, race or sex were unknown were excluded from the calculations. NIBRS collects ethnicity data separately from race but about half of the NIBRS records for ethnicity were listed as unknown. Therefore, ethnicity was not used in the calculation and Hispanic/Latino records were included with records for their recorded race (e.g. White Hispanic was coded as White, Black Hispanic as Black, etc.). Census data records for individuals who reported having two or more races, but no race was identified were excluded from the population percentages.

Statistical Methods Used

Descriptive Statistics

Descriptive statistics are used to describe the basic features of the data in a study. They provide simple summaries about the sample and the measures. Descriptive statistics describe what the data is or what the data shows.

[47] https://www.fbi.gov/services/cjis/ucr/nibrs

Descriptive statistics allow data to be characterized based on its properties. There are four major types of descriptive statistics:

1. Measures of Frequency – Shows how often something occurs
    - Count
    - Percent
    - Frequency
2. Measures of Central Tendency - Locates the distribution by various points
    - Mean
    - Median
    - Mode
3. Measures of Dispersion or Variation - Identifies the spread of Scores by stating intervals
    - Range
    - Variance
    - Standard Deviation
4. Measures of Position - Describes how Scores fall in relation to one another
    - Percentile Ranks
    - Quartile Ranks

Proportionality Measures

- The absolute risk (AR) is the probability of an event in a sample or population of interest.
- The relative risk (RR) is the risk of the event in an experimental group relative to that in a control group.
- The odds ratio (OR) is the odds of an event in an experimental group relative to that in a control group.

A Risk Ratio (RR) or Odds Ratio (OR) of 1.0 indicates that the risk is comparable in the two groups. A value greater than 1.0 indicates increased risk; a value lower than 1.0 indicates decreased risk. RR and OR convey useful information about the effect of a risk factor on the outcome of interest. However, the RR and OR must be interpreted in the context of the absolute risk. Here is a hypothetical example of how to calculate RR and OR:

- In a sample of one hundred subjects who were arrested by the police, eighty were White and twenty were Black. The probability (AR) of a White Subject being arrested by the police is 80% (80 White subjects Arrested / 100 Total subjects Arrested) and 20% for a Black Subject (20 Black subjects Arrested / 100 Total subjects Arrested).
- Of the one hundred subjects who were arrested ten subjects were involved in a use of force incident (6 White subjects and 4 Black subjects). The probability (AR) of a White Subject being involved in a use of force incident is 60% (6 White subjects Involved in Force / 10 Total subjects Involved in Force) and 40% for a Black Subject (4 Black subjects Involved in Force / 10 Total subjects Involved in Force).
- The Risk Ratio (RR) for White subjects is 0.75 (60% AR for Use of Force / 80% AR for Arrests). This means that White subjects are 25% less likely to be involved in a use of force incident than we would expect based upon their proportion of arrests. The Risk Ratio (RR) for Black subjects is 2.00 (40% AR for Use of Force / 20% AR for Arrests). This means that Black subjects are twice as likely to be involved in a use of force incident than we would expect based upon their proportion of arrests.

- The Odds Ratio (OR) for Black subjects is 2.67 (2.00 RR for Black subjects / 0.75 RR for White subjects). This means that Black subjects who are arrested are 2.67 times more likely to be involved in a use of force incident than White subjects are.

Correlation vs Causation

In the example above, there is a negative correlation between White subjects and the likelihood of force being used after an arrest is made (i.e. White subjects are less likely to be involved in a use of force incident after being arrested). There is a positive correlation between Black subjects and the likelihood of force being used after an arrest is made (i.e. Black subjects are more likely to be involved in a use of force incident after being arrested). However, these correlations do not prove that race is the cause of the increased or decreased likelihood of force being used. There is no causal direction implied (correlation does not imply causation): a positive OR does not establish that B causes A, or that A causes B. While causation and correlation can exist at the same time, correlation does not imply causation. Causation explicitly applies to cases where action A causes outcome B. On the other hand, correlation is simply a relationship. Action A relates to Action B—but one event does not necessarily cause the other event to happen.

Correlation is a statistical measure that describes the size and direction of a relationship between two or more variables. A correlation between variables, however, does not automatically mean that the change in one variable is the cause of the change in the values of the other variable. Causation indicates that one event is the result of the occurrence of the other event, i.e. there is a causal relationship between the two events. This is also referred to as cause and effect.

Theoretically, the difference between the two types of relationships is easy to identify — an action or occurrence can cause another (e.g. smoking causes an increase in the risk of developing lung cancer), or it can correlate with another (e.g. smoking is correlated with alcoholism, but it does not cause alcoholism). In practice, however, it remains difficult to clearly establish cause and effect, compared with establishing correlation.

If there is a correlation, then this may guide further research into investigating whether one action causes the other. By understanding correlation and causality, it allows for policies and programs that aim to bring about a desired outcome to be better targeted.

Correlation and causation are often confused because the human mind likes to find patterns even when they do not exist. We often fabricate these patterns when two variables appear to be so strongly associated that one is dependent on the other. That would imply a cause-and-effect relationship where the dependent event is the result of an independent event.

Correlation tests for a relationship between two variables. However, seeing two variables moving together does not necessarily mean we know whether one variable causes the other to occur. Therefore, we commonly say, "correlation does not imply causation."

A strong correlation might indicate causality, but there could easily be other explanations:

- It may be the result of random chance, where the variables appear to be related, but there is no true underlying relationship.
- There may be a third, lurking variable that makes the relationship appear stronger (or weaker) than it is.

Correlations between variables show us that there is a pattern in the data: that the variables we have tend to move together. However, correlations alone do not show us whether the data are moving together because one variable causes the other.

It is possible to find a statistically significant and reliable correlation for two variables that are not causally linked at all. Often, this is because both variables are associated with a different causal variable, which tends to co-occur with the data that we are measuring. Only with well-designed empirical research we can establish causation.

Determining causality is never perfect in the real world. However, there are a variety of experimental, statistical and research design techniques for finding evidence toward causal relationships: e.g., randomization, controlled experiments, and predictive models with multiple variables. Beyond the intrinsic limitations of correlation tests, it is important to understand that

evidence for causation typically comes not from individual statistical tests but from careful experimental design.

Understanding causation is a difficult problem. In the real world, it is never the case that we have access to all the data we might need to map every possible relationship between variables. But there are some key strategies to help us isolate and explore the mechanisms between different variables. For example, in a controlled experiment we can try to carefully match two groups, and randomly apply a treatment or intervention to only one of the groups.

However, we cannot implement these kinds of controlled experiments in a public safety environment. We cannot establish the necessary control groups by denying policing services to certain neighborhoods or refusing to make arrests for certain types of crimes or failing to make traffic stops when violations occur.

How is correlation measured?

For two variables, a statistical correlation is measured using a Correlation Coefficient, represented by the symbol (r), which is a single number that describes the degree of relationship between two variables. The coefficient's numerical value ranges from +1.0 to –1.0, which provides an indication of the strength and direction of the relationship.

If the correlation coefficient has a negative value (below 0) it indicates a negative relationship between the variables. This means that the variables move in opposite directions (i.e. when one increases the other decreases, or when one decreases the other increases).

If the correlation coefficient has a positive value (above 0) it indicates a positive relationship between the variables meaning that both variables move in tandem, i.e. as one variable decreases the other also decreases, or when one variable increases the other also increases.

Where the correlation coefficient is zero this indicates there is no relationship between the variables (one variable can remain constant while the other increases or decreases).

How can causation be established?

Causality is the area of statistics that is commonly misunderstood and misused by people in the mistaken belief that because the data shows a correlation that there is necessarily an underlying causal relationship.

The use of a controlled study is the most effective way of establishing causality between variables. In a controlled study, the sample or population is split in two, with both groups being comparable in every way. The two groups then receive different treatments, and the outcomes of each group are assessed.

For example, in medical research, one group may receive a placebo while the other group is given a new type of medication. If the two groups have noticeably different outcomes, the different experiences may have caused the different outcomes.

There are limits to the use of controlled studies and it would be difficult and potentially dangerous to conduct a controlled experiment of law enforcement activities in a public safety environment. However, we can conduct longitudinal studies over time and measure the potential impacts of changes to police policies, training, and practices on demographic disparities.

Observational studies can also be used to investigate correlation and causation for the population of interest. These studies can look at the groups' behaviors and outcomes and observe any changes over time. The objective of these studies is to provide statistical information to add to the other sources of information that would be required for the process of establishing whether causality exists between two variables.

Additional insights into the data may also be obtained through discussions with stakeholders in the community that may have specific knowledge of the facts and circumstances that may be causing the observed disparities in policing statistics.

Tests of Statistical Significance

This report is designed to be used by Dallas PD to help guide the development of policies, procedures, and training and to help inform discussions with the community about the demographics and disparities in policing activities.

Both Dallas PD and the community want to understand if the observed racial disparities are due to police bias or racial profiling. Unfortunately, this type of quantitative research is unable to answer these causal questions. The presence of racial disparities does not mean that officers are biased. Similarly, the absence of any observed disparities does not mean that officers do not engage in racial profiling. However, sometimes researchers will claim that statistically significant racial disparities in policing statistics "prove" that racial profiling and race-based policing is occurring.[48] Conversely, if an observed racial disparity is not statistically significant that may mislead the reader into believing that officers do not engage in biased policing.

Here is an example from the City of Seattle that illustrates this point:

> In 2000 the Seattle City Council passed a resolution[49] condemning racial profiling and racial pretext stops and establishing a Citizen Task Force to work with the Seattle Police Department to study the issue and bring back recommendations for reform including data collection and analysis. The civilian members of the Task Force were appointed and confirmed by the City Council. The Council appointed a diverse group to the Task Force including representatives from various advocacy groups such as the ACLU and the Urban League. However, there were no Asian representatives on the Task Force.
>
> In Seattle, like most other cities across the country, Asian subjects are underrepresented in policing statistics and concerns about biased policing had not been raised by the Asian community in Seattle before. The underrepresentation of Asian subjects in policing data

[48] "ADDRESSING THE REAL PROBLEM OF RACIAL PROFILING IN SEATTLE, MINNESOTA," Journal of Race, Gender, and Equity, Volume 2, March 2008.
[49] Resolution 30223, Seattle City Council, November 9, 2000.

was statistically significant at the 95% confidence level and the assumption was made that officers were not biased against Asian subjects.

Several months after the Task Force began to meet an incident occurred in the International District where Seattle officers detained a group of Asian-American students for jaywalking. The students claimed that they had been racially profiled.[50] A complaint was filed against the officer involved. One of the allegations was sustained and the officer was reprimanded.[51]

After the incident occurred there was a demand to add Asian representatives to the 14-member task force and the City Council quickly appointed three new Asian members.

Since tests of statistical significance can be misleading in a racial disparity study, this report minimizes the use of this technique.

[50] "Police stop of Asian Americans is called case of race profiling," The Seattle Post Intelligencer, July 13, 2001.
[51] "Officer in jaywalking incident gets reprimand," The Seattle Post Intelligencer, January 18, 2002.

APPENDIX B - Traditional Racial Disparity Analysis

What is Race and Ethnicity? What Are We Trying to Measure?

Before we can discuss racial disparities in policing, we need to define some basic terms and identify the overall goals and objectives of this type of research.

> Race and ethnicity are two concepts related to human ancestry. Race is defined as "a category of humankind that shares certain distinctive physical traits." The term ethnicities is more broadly defined as "large groups of people classed according to common racial, national, tribal, religious, linguistic, or cultural origin or background."
>
> "Race" is usually associated with biology and linked with physical characteristics such as skin color or hair texture. "Ethnicity" is linked with cultural expression and identification. However, both are social constructs used to categorize and characterize seemingly distinct populations. [52]

When the issue of racial bias in policing is studied, the issue is whether an officer's perception of a person's race inappropriately influences how an officer exercises his/her law enforcement authority. Officers may legitimately consider a person's race in some circumstances such as when the officers have received a physical description of a crime suspect that may include age, race, sex, height, weight, clothing, etc.

When a racial disparity analysis is conducted, the goal is to determine whether an officer's conscious or unconscious bias or prejudice influenced their behavior, decision making, or the law enforcement actions they took. Similarly, factors other than officer behavior should also be

[52] "Race and ethnicity: How are they different?" National Geographic

examined such as department policies, training and deployment strategies that may have disparate impacts on certain racial groups.

For this type of analysis, it is not necessary to know how the suspect would identify his or her race/ethnicity. Instead, it is the victim's, witnesses' and officers' perception of the suspect's race that is the critical variable. For example, if an officer were engaged in racial profiling and stopped a driver simply because he thought the driver was Black, it would not matter if the driver considered himself to be mixed race and identified as White.

A typical disparity analysis will examine two quantitative variables and their relationship with one another. The presence of racial disparities in quantitative data does not prove that police officers are biased or that they are engaging in racial profiling. Similarly, the lack of racial disparities in policing activities does **not** mean that officers are consistently behaving in a fair and equitable manner and does **not** mean that officers are free of bias and are not engaged in racial profiling.

The traditional racial disparity methodology begins with the premise that the demographics of policing activities (stops, arrests, uses of force, etc.) should match the demographics of the underlying population (i.e. if 10% of a city's population is Asian then you would expect 10% of traffic stops to involve Asian drivers, 10% of arrests to involve Asian suspects, and so on). When racial disparities are observed they are typically presented as the likelihood of an event happening. For example, if 10% of the population was Asian but 20% of traffic stops involved Asian drivers then we would say that Asian subjects are twice as likely to be stopped by the police as we would expect based on their population. Sometimes these statistics are presented as the odds of one racial group being stopped compared to White subjects (i.e. Black drivers are three times more likely than White drivers to be stopped by the police). Virtually every study that has been conducted using this methodology has found some level of disparity between White subjects and other racial groups. Black, Hispanic, and Native American racial groups typically have more frequent and more serious contacts with the police than White subjects, while Asian subjects have fewer and less serious interactions with police than White subjects.

Cities with small minority populations tend to have the greatest racial disparities in policing because the disparity calculations use the population as the denominator for the equation. For

example, if 10% of the population was Asian and they made up 20% of drivers who were stopped by police the risk ratio would be 2 (twice as likely to be stopped as we would expect based on their population). By contrast if only 1% of the population was Asian and 5% of stops were Asian then the risk ratio would be five and you would say that Asian drivers are five times more likely to be stopped by police than we would expect. When the racial group that you are trying to assess makes up more than a majority of the population, it is impossible to have a risk ratio greater than 2. For example, 83% of residents of Detroit are Black and even if 100% of traffic stops made by Detroit Police were Black drivers you would only have a risk ratio of 1.2 (100% stops/83% population). Cities like Baltimore[53] and New Orleans[54] that have been placed under federal consent decrees for having a pattern or practice of unconstitutional policing practices, would never have Black racial disparities above 2 because their populations are over 60% Black. In New Orleans Black people comprise 61% of the population and 68% of stop and frisks by New Orleans Police officers.[55] Black people are only 11% more likely to be stopped and frisked than we would expect based on their proportion of the population. White subjects in New Orleans make up 30% of the population and 25% of the stops, so they are 17% less likely to be stopped than we would expect. The odds of a Black person being stopped by New Orleans Police are only 13% higher than a White person being stopped and yet the Department of Justice still found a pattern or practice of biased policing by the New Orleans Police Department.

The Seattle Police Department is also under a federal consent decree for having a pattern or practice of unnecessary or excessive force. During their investigation, the Department of Justice found "troubling practices that could have a disproportionate impact on minority communities."[56] Seattle has a small Black population (7%), and two-thirds of the population is White. In 2018, six years after the Consent Decree began, 30% of stops and detentions made by

[53] City of Baltimore Consent Decree
[54] New Orleans Police Department Consent Decree
[55] City of New Orleans Open Data – Stop and Search (Field Interviews)
[56] "Investigation of the Seattle Police Department," United States Department of Justice, Civil Rights Division, December 16, 2011.

Seattle Police officers were Black and 51% were White.[57] This means that the odds of a Black person being stopped in Seattle are more than five times greater for a Black person than a White person. Several reforms implemented under the Consent Decree were specifically designed to reduce racial bias by officers.[58] However, as the data clearly shows, these reforms did not have any impact on racial disparities in police stops and detentions. If we were to use racial disparities in stops as a primary indicator of racial bias by police officers, then we would have to conclude that Seattle Police officers are five times more biased than New Orleans police officers. It is doubtful that the Seattle Monitor or the federal judge overseeing the Consent Decree would agree with that conclusion since that same year they found the Seattle Police Department to be in "full and effective compliance" with the consent decree.[59] This example illustrates how the traditional racial disparity analysis is influenced by the population size of the racial group is being measured. The smaller the population, the greater the disparity is likely to be.

[57] "Stops and Detentions Annual Report 2018," Seattle Police Department.
[58] United States of America v. City of Seattle – Settlement Agreement, United States District Court, Western District of Minnesota, July 27, 2012.
[59] "Judge Finds SPD in "Full and Effective Compliance" With Consent Decree," The Stranger, January 10, 2018.

The Problem with Population

There are many problems with using a city's population as the benchmark for a racial disparity analysis of policing activities. For population to be a valid benchmark, all the following assumptions must be true:

- Each demographic group must commit the same types of offense at the same rates. Each group must have an equal chance of encountering police officers and have the same risk of being stopped, arrested, etc.
- Each demographic group must have the same driving habits and they must violate traffic laws at the same rates.
- Police patrols must be dispersed uniformly across the jurisdiction and they all must perform the same policing functions (i.e. no specialized units or emphasis patrols).
- The police must only stop individuals who are residents of their city so that they will be part of the underlying census population. Police must not make any stops outside of the city limits since non-residents would not be representative of the city's population.
- An officer's perception of a person's race must always match the person's self-reported race in the census data. If there are discrepancies between perception and reality, then population cannot be used as a benchmark. Also, the census data for Dallas has nearly 9.3% of the population identifying as "two or more races.[60]" Since officers do not have this option available, these individuals will be placed in a single race category elevating the numbers above the census population.

[60] Dallas City, Texas, Quick Facts, United States Census Bureau.

If all these assumptions hold true, then any observed racial disparities in policing activities would be an indication of officer bias, discrimination and/or selective enforcement. However, since none of these assumptions are true, population is a poor benchmark to use for measuring disparities in policing. Here are a few reasons why a Population Based Calculation (PBC) for a racial disparity analysis does not work:

1) **Not all residents of a city are at equal risk of being stopped by the police.**

   Based on data from reported crimes, offending behavior can vary significantly by age, race, and sex in both the frequency and the severity of unlawful conduct. There are many factors that may influence criminal behavior and these factors are not distributed evenly throughout the community:

   a. Poverty
   b. Unemployment
   c. Substance Abuse & Addiction
   d. Mental Health Issues
   e. Access to Health Care
   f. Availability of Weapons
   g. Quality of Housing & Homelessness
   h. Family Stability

2) **Not everyone drives the same type of car or drives in the same way.**

   Driving behavior can vary significantly by age, race, and sex. Some people cannot afford to own a car, some can only afford old cars with many problems and others can lease a new car every year. Some drivers may be unable to pay their tickets, car insurance or vehicle license leading to a suspended license. Some people may commute to work while others walk or take public transportation. Some people may just be bad drivers while others may have a professional driver's license.

3) **Police officers do not randomly patrol the city**.

A department will deploy its officers based primarily on calls for service. Areas that are densely populated and have more commercial activity tend to have more calls for service and so more officers will be deployed there. Sparsely populated residential neighborhoods normally have fewer calls and so there will be fewer officers assigned to patrol them. If there are more officers in an area, there will be a greater chance that they will observe suspicious activity or criminal acts and so there is a greater chance of an individual being stopped. A police department may also have emphasis patrols where they focus enforcement efforts in a particular area to combat a specific problem such as drunk driving.

4) Officers will stop non-residents inside the city, and they will make stops outside of the city limits.

Not all stops within a city will involve an individual who does not reside in the city. These could be workers, shoppers, tourists or just people passing through. In addition, some stops made by Dallas PD officers will occur outside of the city limits. This may be due to a pursuit of a suspect across the city border, a request for mutual aid from another jurisdiction, participation in regional task forces or serving an arrest warrant. Since a significant percentage of all police stops involve non-residents, it is not possible to compare the demographics of policing activities with the demographics of the underlying population.

5) Officers are required to guess a person's race.

A person's date of birth and sex are recorded on all state issued identification, but a person's race does not appear in these documents. Whenever an officer makes an arrest or issues a citation, they must record the person's age, race, and sex along with other identifying information such as height, weight, hair color, eye color, home address, etc. Officers are normally discouraged or prohibited by policy from asking questions about a person's race**.**

Some police departments have developed special data collection forms to measure racial bias. These forms will normally ask for the officer's perception of the suspect's race. The

theory is that when measuring racial bias, it is the officer's perception of race that matters regardless of what the person's race is. There are several problems with this approach:

- An officer guessing someone's race is like asking them to guess the person's age. It is not always obvious from outward appearances what racial or ethnic group an individual belongs to. We are not aware of any studies that have been done to determine how often an officer's perception of a person's race matches the person's actual race.

- Officers receive no training in how to identify a person's race. As a result, four officers may arrest a Subject and each officer records the Subject's race differently.

- There is no way to verify whether an officer is recording his actual perception of a person's race or whether the officer is instead recording a race that may look more favorable in the analysis. Any racial disparity analysis must assume that officers will always record their honest perception of a person's race and that officers will have no uncertainty about what the person's race is. Officers know that these racial tracking systems are used to evaluate racial bias and that if they record a disproportionate amount of a minority racial group, they could be flagged as a biased officer. Since there is no way to verify whether the officer recorded his perceptions accurately and there is always going to be some level of uncertainty, there is an incentive to record a race that would be favorable to the officer's statistics. This incentive would be even greater if the officer were consciously engaged in racial profiling or biased policing. As a result, these disparity calculations can never be used to identify potentially biased officers. Even if officers are doing their best to record their actual perceptions of a person's race, we have no way to know how many times that perception will match the person's self-reported race to the census bureau. If the officer were a poor race guesser and his policing activity was compared to the population, the disparities would be large despite the fact the officer was not engaged in biased policing.

- Another problem with recording an officer's perception of race is that we do not know how the officer forms his opinion about the race of the individual. Did the officer

choose the Subject's race based on skin color, hair style, accent, clothing, or other factors? Was it a combination of factors? Did a witness or victim tell the officer the Subject's race? If racial disparities are used to measure officer bias, these are all important questions that must be answered.

6) **Data sets used for a PBC disparity analysis have different racial and ethnic categories and some databases have missing or unknown values.**

The data sets collected by law enforcement agencies are not entirely consistent with the data provided by the census bureau. Internal agency data collection systems can also produce incompatible data for a comparative analysis.

a. **Racial Categories**

The Census Bureau collects information for five main racial groups (White, Black, Asian, Native American and Pacific Islander). The Census allows individuals to identify with two or more races and this mixed-race group comprises 9.3% of the Dallas population. Many internal police databases also include the five main racial groups but there is normally no option for mixed race individuals. To make a meaningful comparison between police data and census data, mixed race individuals from the census must be distributed among the five racial groups. Since officers may be more likely to perceive a mixed-race person as a person of color rather than a White person, it may be necessary to distribute mixed race individuals from the census into their non-White categories. This will have the effect of increasing the non-White population and decreasing racial disparities for those groups.

b. **Unknown Race or Missing Data**

The Census data does include people of an unknown race. However, because law enforcement data is based upon the officer's perception of a person's race and the officer is required to enter that information into the data collection system, there are sometimes cases where the officer could not identify the race, or they failed to enter the data.

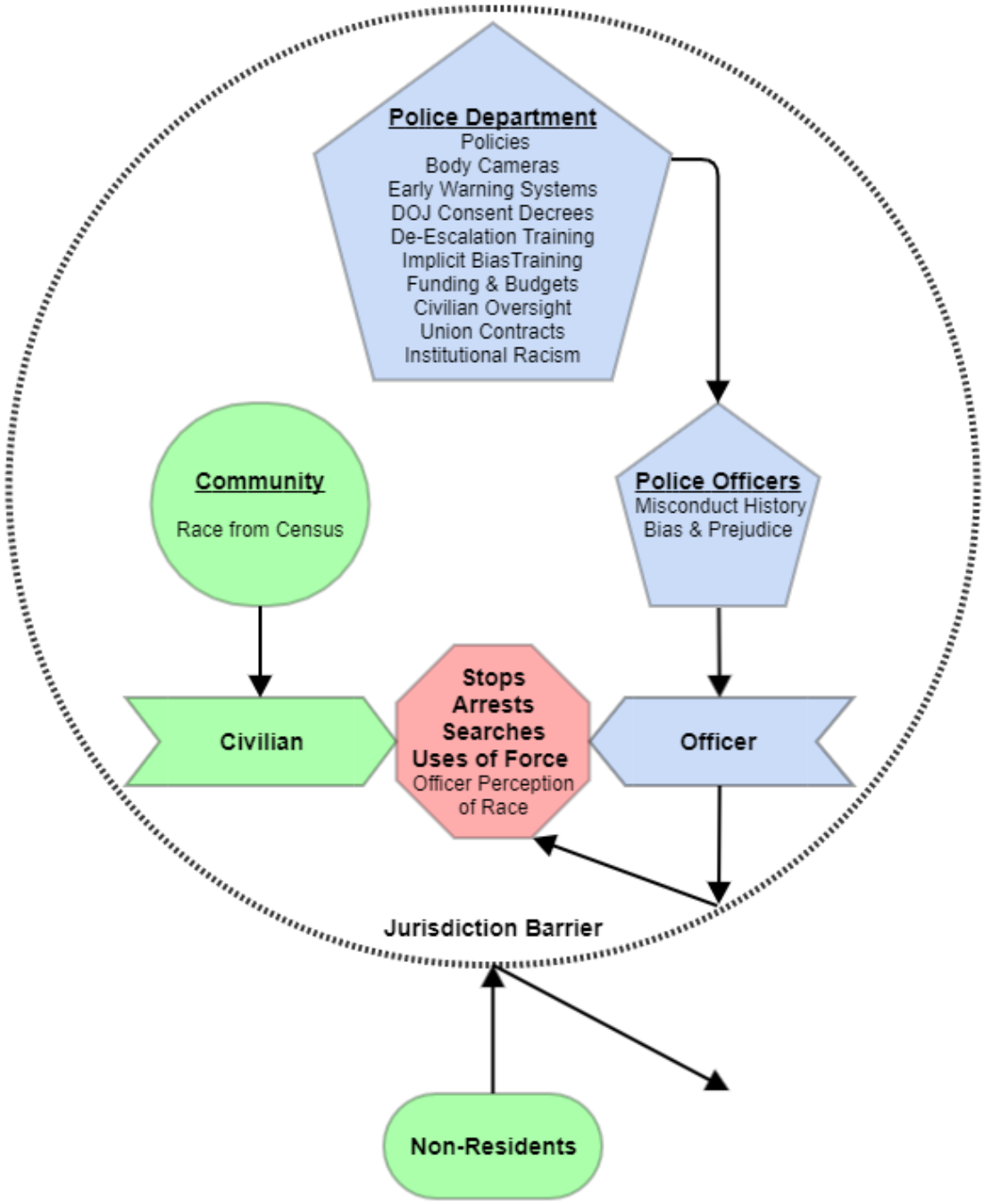
c. **Sometimes ethnicity is included as a racial category and sometimes it is tracked separately from race.**

The US Census tracks ethnicity separately from race. An individual can be recorded as any race with or without a Hispanic designation. By contrast most law enforcement agencies include Hispanic ethnicity as a separate racial category. This forces officers to choose between race and ethnicity. It is unclear whether officers are prioritizing race over ethnicity or vice versa. This can cause problems when trying to compare the law enforcement data with census data.

Traditional Racial Disparity Analysis Model

The traditional racial disparity analysis methodology that uses population-based calculations (PBC) is overly simplistic and makes unrealistic assumptions for the model to work.

Traditional Racial Disparity Analysis Model



The traditional racial disparity analysis model relies on the following assumptions:

1) A person's race is the only demographic variable that matters. Usually, no examination is made of other demographic traits such as age or sex.

2) Offending behavior within the community is homogeneous. All racial groups are equally likely to commit offenses and all types of offenses are committed at the same rate regardless of race (i.e. if the population were 50% Black and 50% White then 50% of assaults, robberies, burglaries and all other types of crimes and traffic violations would have been committed by Black subjects).

3) Each racial group within the community has an equal risk of being stopped by the police. This would require some type of randomization. Each person in the jurisdiction would randomly be committing crimes at the same rate as everyone else and they are equally likely to encounter a police officer as they are committing the offense.

4) Police officers would be randomly deployed around the city, and they would need to stop anyone they see who is committing a crime or traffic offense.

5) Since the benchmark used in the disparity calculation comes from the census of the jurisdiction's population, it must be assumed that no one residing outside the jurisdiction will be stopped by officers and officers will conduct all their enforcement action within the jurisdiction.

If all the above assumptions are true, then we would expect the racial composition of police stops and arrests to match the racial makeup of the population. If any racial disparities exist it would be because the officers were not behaving in a random, neutral, and unbiased manner. This leads to the conclusion that racial disparities in policing are caused by officer bias, discrimination, and racial profiling.

Since the racial disparities are assumed to be caused by police officers engaged in unwanted behavior, the remedies proposed to reduce the racial disparities are focused on trying to change officer behavior such as:

- Implicit Bias Training
- De-Escalation Training
- Early Warning Systems
- Body Cameras
- Policy Changes
- Civilian Oversight & External Reviews

While many jurisdictions have implemented many of these types of reforms there is little evidence that officer behavior has changed, and the observed racial disparities continue to exist. This is true even with departments that have undergone intensive reforms under federal consent decrees with independent monitors.[61] If an overrepresentation of a racial group in policing statistics infers officer bias, then we must assume that officers give preferential treatment to racial groups that are underrepresented in policing data. Usually these are White subjects, Asian subjects, and Pacific Islanders.

[61] "Report: Seattle police use low levels of force, but racial disparity remains," The Seattle Times, February 6, 2019.

Using this traditional disparity analysis model on data from Dallas PD will generate large demographic disparities between the County population and reported offenders, arrests, and uses of force.

Demographics of the Population of Dallas and Arrest and Use of Force Data from Dallas PD

Data Source		Census	NIBRS	NIBRS	NIBRS	PFAS
Data Type		Population	Crime Victims	Reported Suspects	Arrestees	Uses of Force
# Records		1,304,379	388,816	420,019	61,143	6,634
Sex	Female	50.4%	49.6%	21.4%	23.1%	19.9%
	Male	49.6%	50.4%	78.6%	76.9%	80.1%
Race	Hispanic	43.5%	32.6%	30.0%	30.3%	26.8%
	White	28.9%	27.0%	10.5%	14.3%	17.6%
	Black	23.6%	38.6%	58.9%	54.7%	54.7%
	Asian	3.8%	1.6%	0.5%	0.6%	0.7%
	Nat Amer	0.2%	0.2%	0.1%	0.1%	0.2%
Age	0-17	24.8%	4.0%	5.7%	5.4%	6.5%
	18-29	19.2%	31.6%	33.6%	40.6%	41.9%
	30-39	16.0%	25.9%	22.7%	27.9%	30.2%
	40-49	12.0%	17.0%	10.8%	14.2%	13.4%
	50+	28.0%	21.6%	27.3%	11.9%	8.0%

Risk Ratios Based Upon the Traditional Disparity Methodology – Population-Based Benchmarks – Dallas PD

Data Source		Census	NIBRS	NIBRS	NIBRS	PFAS
Data Type		Population	Crime Victims	Reported Suspects	Arrestees	Uses of Force
# Records		1,304,379	388,816	420,019	61,143	6,634
Benchmark			Population	Population	Population	Population
Sex	Female	50.4%	1.0	0.4	0.5	0.4
	Male	49.6%	1.0	1.6	1.6	1.6
Race	Hispanic	43.5%	0.7	0.7	0.7	0.6
	White	28.9%	0.9	0.4	0.5	0.6
	Black	23.6%	1.6	2.5	2.3	2.3
	Asian	3.8%	0.4	0.1	0.2	0.2
	Nat Amer	0.2%	0.8	0.3	0.5	0.9
Age	0-17	24.8%	0.2	0.2	0.2	0.3
	18-29	19.2%	1.6	1.8	2.1	2.2
	30-39	16.0%	1.6	1.4	1.7	1.9
	40-49	12.0%	1.4	0.9	1.2	1.1
	50+	28.0%	0.8	1.0	0.4	0.3

Using a traditional racial disparity analysis, significant disparities are found for reported offenders, arrests and uses of force for Male subjects, Black subjects, and subjects between 18 and 39. Based on their share of the population, Black subjects are more than twice as likely than expected to be reported as a crime suspect, be arrested and have force used against them. This population-benchmark method leads to consistent overrepresentation in all police actions for Black, male and young adult subjects and consistent underrepresentation for Female, Hispanic, White, Asian, Native American, juvenile and older subjects. The conclusion that would be reached based on this analysis is that Dallas PD officers are biased against subjects who were Black, Male or between 18 and 39 while officers appeared to give preferential treatment to Female, Hispanic, White, Asian, Native American, juvenile and older subjects. When this

simplistic analysis has been done in other jurisdictions, Black subjects are consistently overrepresented in the results. While we do not agree with this methodology, the results are included in this report to highlight the differences between a traditional disparity analysis and the more comprehensive methodology that we have developed for this study.

Demographic Disparity Matrix Based Upon the Traditional Disparity Methodology – Population-Based Benchmarks - Dallas PD

Data Source		Census	NIBRS	NIBRS	NIBRS	PFAS
Data Type		Population	Crime Victims	Reported Suspects	Arrestees	Uses of Force
# Records		1,304,379	388,816	420,019	61,143	6,634
Benchmark			Population	Population	Population	Population
Sex	Female	50.4%	0	-	-	-
	Male	49.6%	0	++	++	++
Race	Hispanic	43.5%	-	-	-	-
	White	28.9%	0	-	-	-
	Black	23.6%	++	++	++	++
	Asian	3.8%	-	-	-	-
	Nat Amer	0.2%	0	-	-	0
Age	0-17	24.8%	-	-	-	-
	18-29	19.2%	++	++	++	++
	30-39	16.0%	++	+	++	++
	40-49	12.0%	+	0	0	0
	50+	28.0%	0	0	-	-

Symbol	Disparity	Risk Ratio
++	Positive	> +50%
+	Positive	+25% to +50%
0	None	-25% to +25%
-	Negative	-25% to -100%

When the traditional racial disparity methodology is used to analyze data from Dallas PD, a reader might conclude that Black subjects suffer some level of discrimination when they are arrested, or when force is used against them. However, based on the underrepresentation for Hispanic, White, Native American, and Asian subjects in these types of law enforcement encounters, one would also have to conclude that subjects from these racial/ethnic groups receive preferential treatment from Dallas PD officers. If we assume that the disparities are an indication of officer bias, we will also have to conclude that Dallas PD officers are biased against Males and give preferential treatment to Females. Similarly, we would also have to conclude that Dallas PD officers give preferential treatment to juveniles and those over 50 since these groups are consistently underrepresented in law enforcement actions compared to their share of the population.

The researcher using population-based benchmarks might conduct multivariate regression tests to determine whether the disparities remain statistically significant when other factors are taken into consideration. They may also break down the data by individual neighborhoods to see if disparities are greater in some parts of the jurisdiction than others. However, no matter how many statistical techniques are used, some level of racial disparity will remain. Although this type of quantitative analysis cannot be used to prove racial bias by individual officers, the researchers may propose interventions that are designed to reduce racial bias and ensure fair and equitable policing. After those reforms are implemented, the researchers will conduct the same analysis with more recent data and will invariably find the same racial disparities that they observed before the reforms were implemented. This will reduce public trust and confidence in the police since none of the reforms will have produced the desired results. This cycle of "Research and Reform" will cost a lot of money, take years to implement and can erode community relations with the police.

Comparing Demographics of Policing Data with Census Data

Census data is often used to examine demographic disparities with policing statistics. There are several challenges that prevent a strictly apples-to-apples comparison. Census data is based on self-reporting of the individual completing the census form. An individual's age and sex are reported to the department of motor vehicles and will appear on the person's driver's license. If an officer has access to a Subject's state ID, then they will be able to record the Subject's self-reported demographic information in their reports and data entry systems. However, an individual's race does not appear on state identification documents. While officers routinely will ask subjects for their name and date of birth for identification purposes, they do not inquire about the person's race. This means that all racial information obtained by law enforcement agencies is based upon the officers' perceptions of a person's race.

When we examine racial disparities between law enforcement data and the census a small difference in the perceived race of subjects can have a substantial impact on the risk ratio.

Perception vs Self Reporting

One argument that is made in favor of reporting the officer's perception of the Subject's race rather than the Subject's self-reported race is that when issues of racial profiling are examined it is most important to know what the officer's perception of the Subject's race is even if that perception is incorrect. If we are going to examine issues of racial bias in policing, it is essential to understand how officers perceive the individuals they interact with. However, the methodology breaks down when we attempt to compare officer perceptions of the race/ethnicity of the subjects they stop with self-reported race/ethnicity of the jurisdiction's population from the US Census. We do not know how often an officer's perception of a Subject's race matches the Subject's self-reported race/ethnicity. Even if officers were 90% accurate in their perceptions of race/ethnicity, this still introduces a large margin of error when policing statistics are compared with the census demographics.

When race data is collected as a suspect description for law enforcement purposes, officers have an incentive to report the Subject's race as accurately as possible in the CAD system. This race

data will be used across the entire criminal justice system and may be used for suspect identification in subsequent incidents.

Do officers have an incentive to report their perceptions of race accurately?

When officers enter a Subject's demographic information (age, race, sex, height, weight, hair color, eye color, etc.) into an incident report or CAD system, there is a strong incentive to enter the data as accurately as possible so that the Subject can be correctly identified in future encounters and matched with prior contacts/arrests. However, when a standalone data system is created specifically designed to monitor and evaluate officer activity, there is less of an imperative to report the information accurately. There may even be an incentive to misreport the data to reduce concerns that may be raised about the officer's activities. We are not suggesting that officers would intentionally misrepresent the data. However, since all the race/ethnicity data that is entered into these systems is based on an officer's perceptions and there is no way to challenge the veracity of those perceptions, officers may have an incentive to err on the side of reporting less controversial statistics. For example, if an officer stops a mixed-race Subject who could be perceived as Hispanic, Black, or Native American, how will the officer decide which race to enter into the database? There is no correct answer and no way to verify whether or not the officer is reporting on his/her best guess, so officers may enter the option that they believe will raise the fewest questions.

Perceptions vs Reality – What is the Best Way to Track Race in Policing?

Since a person's race is not recorded on state identification documents and officers are not required to ask a Subject what his or her race is, we usually must rely on the officer's perception of the race of people they encounter. There is no way to verify whether the officer's perception is accurate or not. No one knows how often an officer's perception will match how the person identified their race to the census bureau. How do officers perceive mixed race individuals or the complex combinations of race and ethnicity? There is no test to determine how skillful officers are at guessing someone's race or how accurate their guesses are. We do not know how many times officers are uncertain about someone's race and simply make a guess when they enter the data. If an officer is uncertain of someone's race, how can the officer be biased against that person? Since it is impossible to gauge the veracity of an officer's perception of a person's race, there is no way to assess whether officers are making up their answers or only entering data that they think may be favorable to them in the analysis. Comparing an officer's perception of a person's race/ethnicity to the person's self-reporting of race/ethnicity to the census bureau is akin to guessing the weight of attendees at a county fair. Officers are only able to base their decisions on characteristics that are readily observable (skin tone, hair color, facial features, accents, etc.). Officers do not have access to the person's genealogy and will know nothing about their background or family history. Similarly, there are no objective standards for reporting a person's race to the census bureau. A dark-skinned person who is mixed race may identify as White even though the officer may perceive them as Black.

There is no definition of different racial groups and no chart that officers can use to help them identify someone's race. Officers are given no guidance and are forced to guess a person's race based upon each officer's unique Subjective criteria. Similarly, the census data does not necessarily reflect what the population may look like from an officer's perspective. Individuals may choose their own race when filling out census forms. There are no objective standards for filling out the census forms and an individual is free to choose whatever race/ethnicity they want.

There are infinite numbers of permutations that could occur between perceived and self-reported race, but here is one example that illustrates how difficult it is to make a meaningful comparison between a person's self-reported race and the officer's perception of that person's race. An individual who has a Black mother, a White father and a Hispanic grandparent may choose to identify themselves in several diverse ways on the Census form:

Reported to Census Bureau	
Race	**Ethnicity**
Black	Hispanic
White	Hispanic
Mixed Race	Hispanic
Black	Non-Hispanic
White	Non-Hispanic
Mixed Race	Non-Hispanic

If an officer stops this person and is required to record her race based solely on the officer's perceptions, the officer will have no knowledge of the person's family history or the person's view of their own race. The officer would be free to enter any racial/ethnic group that they thought was most appropriate:

Officer's Perception of Race/Ethnicity
Black
White
Native American
Hispanic
Asian
Pacific Islander

An officer may make hundreds of stops each year. How often will the officer's perception of a person's race match what that person reported to the census bureau? No one knows the answer to this question, but it is reasonable to assume that there will be a significant margin of error.

Racial Profiling Definitions

The American Civil Liberties Union has defined the term "racial profiling" as follows:[62]

> "Racial Profiling" refers to the discriminatory practice by law enforcement officials of targeting individuals for suspicion of crime based on the individual's race, ethnicity, religion, or national origin. Criminal profiling, generally, as practiced by police, is the reliance on a group of characteristics they believe to be associated with crime. Examples of racial profiling are the use of race to determine which drivers to stop for minor traffic violations (commonly referred to as "driving while black or brown"), or the use of race to determine which pedestrians to search for illegal contraband.
>
> Racial profiling does not refer to the act of a law enforcement agent pursuing a suspect in which the specific description of the suspect includes race or ethnicity in combination with other identifying factors.
>
> Defining racial profiling as relying "solely" on the basis of race, ethnicity, national origin, or religion can be problematic. This definition found in some state racial profiling laws is unacceptable because it fails to include when police act on the basis of race, ethnicity, national origin, or religion in combination with an alleged violation of a law. Under the "solely" definition, an officer who targeted Latino drivers who were speeding would not be racial profiling because the drivers were not stopped "solely" because of their race but also because they were speeding. This would eliminate the vast majority of racial profiling now occurring.
>
> Any definition of racial profiling must include, in addition to racially or ethnically discriminatory acts, discriminatory omissions on the part of law enforcement as well.

[62] "RACIAL PROFILING: DEFINITION," ACLU

The International Association of Chiefs of Police (IACP) model policy for Bias-Free Policing[63] defines "biased policing" as:

> Discrimination in the performance of law enforcement duties or delivery of police services, based on personal prejudices or partiality of agency personnel toward classes of people based on specified characteristics.
>
> For the purposes of this policy, real or perceived personal characteristics, to include but not limited to race, ethnic background, national origin, immigration status, gender, gender identity/expression, sexual orientation, religion, socioeconomic status, age, disability, or political affiliation.
>
> Agencies should be prepared to recognize all forms of bias in the delivery of police services, whether the bias is based on prejudice towards specified characteristics, nepotism and favoritism, or other factors.
>
> "Fair and bias-fee treatment" means: Conduct of agency personnel wherein all people are treated in the same manner under the same or similar circumstances irrespective of specified characteristics.

[63] "Bias-Free Policing," Law Enforcement Policy Center, International Association of Chiefs of Police, January 2020.

Additional Methodology Discussion

This report provides a quantitative analysis of demographic disparities found in law enforcement data from Dallas PD. While quantitative data can be used to identify correlations between different variables, these correlations cannot be used to make findings or conclusions as to causation. This study is able to identify and measure demographic disparities by the race, age and sex of the subjects involved, but it does not attempt to determine whether these racial disparities may be caused by officer bias, racial profiling, or other discriminatory practices. These are causal questions that cannot be answered by a quantitative study alone.

The presence of quantitative demographic disparities does not necessarily mean that officers are engaged in biased behavior. Similarly, the absence of observable racial disparities does not mean that individual acts of bias by police officers are not occurring. This study is merely a starting point for a deeper examination of these issues by Dallas PD, Dallas and their community. This report may also be used to learn more about how the community requests services from Dallas PD and how officers exercise their discretion when making law enforcement decisions. One of the goals of this report is to stimulate an ongoing discussion between Dallas PD and the neighborhoods they serve about procedural justice, fairness, and equity in policing.

The research methodology used in this report to measure demographic disparities employs several activity-based benchmarks rather than a single population-based benchmark. While the demographic disparities found in this report tend to be smaller than disparities found in other studies that use population-based benchmarks, these activity-based disparities are more reflective of officer behavior and could be influenced by biased enforcement practices. The disparity scale has been adjusted to account for the smaller observed disparities. Demographic disparities greater than 50% above the benchmark are considered to be a high disparity. This level of disparity is roughly one-quarter of typical disparities found in population-based studies (usually two or more times greater than the population).

Population-Based Benchmarks are Not Reliable

This report contains a thorough critique of the population-based benchmarking methodology as well as a detailed explanation of why the use of activity-based benchmarks produces more meaningful results. Unfortunately, population-based benchmarks are still widely used in disparity studies of law enforcement data[64] and this methodology continues to have many advocates.[65] One reason for the popularity of population-based benchmarks is that the results are easy to calculate, and they consistently produce the large racial disparities that many people expect to see in policing data. Proponents of population-based benchmarks typically argue that at least some portion of the large racial disparities is caused by officer bias, institutional discriminatory practices of law enforcement agencies and/or the practice of racial profiling.

When faced with the large racial disparities produced by a population-based methodology and accusations of racial bias and systemic discriminatory practices, law enforcement agencies have difficulty responding in any meaningful way. Since the methodology used to generate the disparities is flawed, agencies have a hard time explaining why those disparities are not due to racial bias by officers or the department. The typical reaction from law enforcement agencies is to say that the disparities are concerning,[66] more analysis should be done to determine the causes of those disparities[67] and/or a general denial that officers are engaged in racial profiling or biased practices.[68] There is no simple or obvious solution to reducing racial disparities in

[64] "The Police Departments With The Biggest Racial Disparities In Arrests And Killings," Five Thirty Eight, February 4, 2021.
[65] "Black people 5 times more likely to be arrested than whites, according to new analysis," Changing America, June 11, 2020.
[66] "'Needs to be contextualized' - APD chief responds to preliminary racial bias audit report," WRGB Channel 6 News Albany, November 5, 2020.
[67] "West Hartford Police Chief Responds to Report on Traffic Stops, Racial Disparities," Patch, May 13, 2016.
[68] "Honolulu Police Chief Denies Racial Disparities Are Proof Of Profiling," Honolulu Civil Beat, July 22, 2020.

policing no matter how those disparities are calculated.[69] There is no biased-free policing policy that could be adopted or implicit bias training program could be implemented that would significantly reduce these racial disparities. This is because the root causes of the racial disparities do not lie entirely with law enforcement agencies or their officers.[70]

It should be noted that Police Strategies LLC is not the first organization to criticize the population-based approach for calculating racial disparities in policing. A number of nationally recognized academic researchers have articulated the significant problems with using population-based benchmarks and how this methodology has already been discredited by the social sciences. For example, here is an explanation of a racial disparity study that was done for the Tulsa Police Department:

> "The 2018 Tulsa Equality Indicators report on data collected and analyzed by the Community Service Council found that black people were five times more likely than Hispanic/Latino people and twice as likely as white people to experience officer use of force. The 2019 version of that report found that black people were three times more likely to experience officer use of force than Hispanic/Latino people. The Equality Indicators studies use population demographics in determining use-of-force rates. 'We don't do that because people in society are not equally at risk for an encounter with police — whether that encounter is benign or extreme — involving deadly force, for example,' Michael Smith, a UTSA criminology professor, said during the preliminary report presentation with Engel in September. 'That risk does not share equally.' **Smith also said social sciences have discredited using the population-at-large comparison as it relates to police**

[69] "Solving racial disparities in policing," The Harvard Gazette, February 23, 2021.
[70] "Officer characteristics and racial disparities in fatal officer-involved shootings," Proceedings of the National Academy of Sciences of the United States of America (PNAS), July 22, 2019. ("We find no evidence of anti-Black or anti-Hispanic disparities across shootings, and White officers are not more likely to shoot minority civilians than non-White officers. Instead, race-specific crime strongly predicts civilian race. This suggests that increasing diversity among officers by itself is unlikely to reduce racial disparity in police shootings.")

> **use of force. 'When you compare a police outcome — use of force — against a static population based on a census, it's like comparing apples to oranges,' he said. 'We don't do that in the scientific community'"**[71] (emphasis added).

The John Finn Institute for Public Safety has done a considerable amount of research on racial disparities in policing. In their reports they discuss the problems with using population-based benchmarks:

> "Many attempts have been made to form benchmarks that approximate the racial and ethnic composition of the violator population. The simplest and easiest approach to this problem is to compare those who are stopped to the residential population of the surrounding jurisdiction. **This approach suffers from many shortcomings, however, which are likely to lead to erroneous inferences about bias."**[72] (emphasis added).

Some researchers have pointed out that while population-based benchmarks are considered to be the worst methodology to use, there is still disagreement on what would be a better alternative:

> "While there is some consensus in the research community that residential census populations are the least reliable of the benchmarks available, there is no such consensus regarding the validity of other techniques."[73]

[71] "Tulsa police use-of-force encounters final report released, but 'richest and most important' dataset still to come," Tulsa World, March 4, 2020.
[72] "Traffic Stops by Suffolk County Police," The John F. Finn Institute for Public Safety, Inc., September 2020.
[73] Rob Tillyer, Robin S. Engel, and John Wooldredge, "The Intersection of Racial Profiling and the Law," Journal of Criminal Justice 36 (2008): 138-53, p. 143.

On the topic of population-based benchmarks, it is important to hear the perspectives of credible experts in this field who have published relevant research work in peer reviewed academic journals. Here is a list of a experts that the media and other interested parties may want to speak with regarding the use of population-based benchmarks for measuring racial disparities in policing:[74]

- Dr. Robert Worden, John Finn Institute for Public Safety
- Dr. Robin Engel, National Policing Institute
- Dr. Michael Smith, University of Texas at San Antonio
- Dr. Geoffrey Alpert, University of South Carolina
- Dr. Matthew Hickman, Seattle University
- Dr. John Worrall, University of Texas at Dallas

[74] None of the researchers listed were involved in this study or the prior study done for the Spokane Police Department.

If Law Enforcement Officers Engaged in Systemic Biased Practices, What Would the Data Look Like?

What would we expect the data to look like if law enforcement officers were engaged in systemic biased practices and/or racial profiling? If a law enforcement agency had policies that were discriminatory or if officers were routinely acting with conscious bias against specific racial groups, what would the results of a racial disparity analysis look like?

In the 1990s, the practice of racial profiling and other discriminatory law enforcement practices were widespread as part of the War on Drugs strategy.[75] The theory was that Black subjects were more likely to be involved in trafficking and selling narcotics than other racial groups. Some agencies had policies and practices that would target Black drivers for pretext stops in order to search for contraband.[76] Officers would first identify the race of the driver and then would find any type of traffic violation that could be used as a pretext for the stop. The purpose of these stops was to investigate and search for narcotics and other illegal drugs. While non-Black drivers were observed committing the same traffic violations, officers would not stop them because they did not meet the profile of suspected drug traffickers.

Whenever Black drivers were stopped, they were more likely to be searched than drivers of other racial groups. Even though the hit-rates for searches of Black drivers were not greater than for other racial groups, the higher frequency of searches would produce more arrests increasing racial disparities for arrests of Black drivers. A higher stop rate for Black drivers would also uncover other problems such as lack of insurance, suspended licenses, and outstanding warrants. This would increase racial disparities in arrests and citations for Black subjects. The more arrests were made of Black subjects, the more uses of force would occur during those arrests, further increasing racial disparities.

[75] "Driving While Black," The Minnesota Post, August 16, 1998.
[76] "New Jersey State Police's first 100 years characterized by racial prejudice," The Conversation, March 11, 2021.

Using an activity-based benchmarking methodology, Table 1 shows the results for a hypothetical law enforcement agency that was targeting Black subjects for enforcement action.

Disparity Matrix for Hypothetical Agency Engaged in Racial Profiling of Black Drivers

		Police Actions			
		Stops	Arrests	Searches	Uses of Force
Risk Ratio		Stops / Suspects	Arrests / Stops	Searches / Stops	UOF / Arrests
Race	White	0	0	0	0
	Black	++	++	++	++
	Nat Amer	0	0	0	0
	Asian	0	0	0	0
	Hispanic	0	0	0	0

Symbol	Disparity	Risk Ratio
++	Positive	> +50%
+	Positive	+25% to +50%
0	None	-25% to +25%
-	Negative	-25% to -100%

This hypothetical example assumes that each racial group was equally likely to be involved in unlawful behavior and each group was equally likely to come into contact with the police. The model also assumes that the police were only biased against Black subjects and treated all other racial groups equally. In this example, the only cause for the racial disparities would be systemic bias and it would by observed in all types of police encounters and law enforcement actions.

Strategies for Reducing Racial Disparities in Policing

While quantitative studies cannot identify individual acts of biased policing and cannot definitively confirm or deny the existence of systemic biased practices in policing, the data is able to show where disparities exist and the level of disparity that is present. It has been argued that any racial disparity between policing data and the population is an undesirable result regardless of the cause of those disparities.[77] Since none of the police reforms implemented over the last decade have significantly reduced population-based racial disparities in law enforcement activities, a new movement has begun to reduce police department budgets and transfer law enforcement responsibilities to other departments and community organizations.[78]

The Duluth Chapter of the NAACP recently conducted a racial disparity study of the Duluth Police Department using a population-based benchmark approach. This study found large disparities for Black and Native American subjects in arrests and uses of force and other police activities. The NAACP called on Duluth PD to make changes that would bring the racial composition police actions to be proportional to the demographics of the City of Duluth by December 2022.[79]

A similar argument was made by investigative reporters at the San Diego Union-Tribune. They conducted racial disparity studies of multiple law enforcement agencies in San Diego County and consistently found elevated levels of racial disparities in police actions when compared to the population. The reporters argued that the racial disparities were a problem regardless of the causes of those disparities and that the police agencies should take actions to reduce them:

> "What a lot of experts who study this data professionally say, is that it is difficult to prove bias without a shadow of a doubt within data, though not impossible. However, the burden of proof should be as equally placed on police departments,

[77] "The Numbers Don't Speak for Themselves: Racial Disparities and the Persistence of Inequality in the Criminal Justice System," Association for Psychological Science, 2018.
[78] "What does 'defund the police' mean and does it have merit?" Brookings, June 19, 2020.
[79] "NAACP: Data shows Pierce County Police arrest, use force more on people of color," Pierce County News Tribune, March 26, 2021.

if not more so. But, beyond that, let's focus on addressing disparities. Let's not get caught in the weeds with where these disparities come from."[80]

Since the root causes of observed racial disparities cannot be identified by quantitative studies alone, it would be difficult to design effective strategies to reduce those disparities. Existing strategies such as implicit bias training, de-escalation training, body cameras, civilian oversight, and biased-free policing policies have all failed to reduce racial disparities in policing. For example, the Seattle Police Department has implemented most of the policies and programs designed to prevent biased policing and racial profiling. The Department has also been under a federal consent decree for a decade and yet the population-based racial disparities still persist.[81] The Seattle PD racial disparity studies used population as the primary benchmark which negatively impacts the validity of their results and findings.[82]

It would not be possible for a law enforcement agency to bring the racial composition of its stops and arrests in line with the demographics of the local population without the use of some type of racial quota system. Such a system would itself be discriminatory and unlawful. However, there are other changes that an agency could make to its policies and practices that could potentially reduce racial disparities. In order to be lawful and constitutional, the reforms must be applied fairly and equitably across all racial groups. For example, if an agency had large racial disparities in arrests for drug possession crimes, the agency could make a policy decision to stop making arrests for those crimes resulting in the elimination of racial disparities in this area of enforcement. However, there may be public safety reasons for not making such a policy change. If the primary goal is to reduce racial disparities and the responsibility is left solely to the law enforcement agency to reduce those disparities, then altering enforcement practices would be an effective method for achieving that goal.

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[80] "Data: San Diego Police And Sheriff's Officers Target Minorities," KPBS, March 29, 2021.
[81] "Report shows Seattle police enforcement still disparate along racial lines," Crosscut, May 1, 2019.
[82] "The Science of Justice: Seattle Police Department National Justice Database City Report," Center for Policing Equity, January 2021.

This report does not advocate for or against any specific policy or program change that may affect racial disparities. There are a number of options that Dallas PD, elected officials and the community may wish to consider. This report will identify some potential changes in areas that may have the greatest impact on racial disparities. By identifying where racial disparities in policing exist and the magnitude of those disparities, the impacts of policy and procedural changes can be evaluated.

Why Study Racial Disparities in Policing?

The traditional methodology for examining racial disparities in the criminal justice system is outlined in a report by The Sentencing Project:[83]

> "Racial disparity in the criminal justice system exists when the proportion of a racial or ethnic group within the control of the system is greater than the proportion of such groups in the general population.
>
> "The causes of such disparity are varied and can include differing levels of criminal activity, law enforcement emphasis on particular communities, legislative policies, and/or decision making by criminal justice practitioners who exercise broad discretion in the justice process at one or more stages in the system.
>
> "Illegitimate or unwarranted racial disparity in the criminal justice system results from the dissimilar treatment of similarly situated people based on race. In some instances, this may involve overt racial bias, while in others it may reflect the influence of factors that are only indirectly associated with race. Moreover, in some cases disparity results from unguarded, individual- or institution-level decisions that are race-based. Structural racism, derived from the longstanding differential treatment of those with characteristics highly correlated with race (e.g., poverty) can cause or aggravate racial disparity as well."

[83] Reducing Racial Disparity in the Criminal Justice System – A Manual for Practitioners and Policymakers, The Sentencing Project, 2008.

The criminal justice system is the end of the road for many individuals who have faced discrimination their entire lives. Once they enter the system, the impacts of discrimination are often amplified and worsened. Low-income defendants may not be able to make bail, forcing them to wait in jail even before any finding is made of their guilt. While in jail they may lose their jobs, their homes, and their families. If they are convicted of a crime, they will lose even more of their rights and their criminal history will make it difficult to find a decent job that pays a living wage. These pressures may lead to recidivism with even stiffer punishments if they are caught.

The United States jails more of its citizens per capita than any other nation in the world.[84] The incarceration rates for Black subjects are five times higher than the rate for White subjects, but this is down from an 8 to 1 disparity 16 years ago.[85] The reduction in racial disparities in incarceration rates may be due to a 30% decline in arrests for robbery, assault and rape cases involving Black suspects.[86] However, during this same period, as the racial disparities in incarceration rates were reduced, the disparities in sentencing increased with Black defendants receiving longer sentences than White subjects for committing the same crime.[87] This could be due to a number of factors including Black defendants having longer criminal histories and/or biased decision making by prosecutors and judges.

The racial disparities that are found in the police activity data from Dallas are similar to the disparities found in cities throughout Texas and in jurisdictions around the country. These disparities are undoubtedly a reflection of systemic bias in our society, institutional racism in our government and inequality throughout our economic system. It is unlikely that the observed racial disparities in policing data are caused by "a few bad apples."[88] This phrase is often used as

[84] World Prison Population List, Institute for Criminal Policy Research, 2018.
[85] Black imprisonment rates are down. It's important to know why. The Minnesota Post, April 30, 2019.
[86] Trends in Correctional Control by Race and Sex, Council on Criminal Justice, December 2019.
[87] Same Crime, More Time, Georgia State University Research Magazine, Spring 2020.
[88] 'A few bad apples': Phrase describing rotten police officers used to have different meaning, ABC News, June 14, 2020.

a defense mechanism and to deflect concerns away from broader inequity issues and the need for systemic reforms.[89] The simplistic "bad apple" analogy has also been turned against those agencies that try to use it to protect themselves from additional scrutiny.[90] Officer bias towards minorities will likely reflect society's bias towards these underprivileged groups. There is no way to train this bias away and the best that can be hoped for is to prevent officer bias from impacting discretionary decision making and law enforcement behavior. The issue facing law enforcement today is how to identify the extent of this bias and what to do about the bias once it is discovered.

There is no doubt that there are demographic disparities by race, age, and sex in all aspects of policing and in the criminal justice system. The goal of this report is to identify where racial disparities exist using the police activity data provided by Dallas PD and determine how large those disparities are. This report does not attempt to determine to what extent these racial disparities are caused by officer bias, racial profiling, or other discriminatory practices. These are causal questions that cannot be answered by a purely quantitative study.

To effectively measure officer bias, qualitative data must also be examined. Simply counting the number of times an officer does something (stops, arrests, uses of force, etc.) will not tell us anything about why the officer decided to act and will not reveal how well the officer performed his or her job.

Instead of measuring frequencies to determine bias, officers need to be evaluated on the quality of their interactions with the public. How well do officers treat the subjects they interact with? Are they fair and impartial or are they unprofessional and belligerent? While law enforcement agencies typically do not collect this type of qualitative data on officer behavior, Stanford University recently did collect this information during an officer behavioral study for the Oakland Police Department.[91] Researchers reviewed body worn camera videos of officer interactions with civilians and found that "police officers speak significantly less respectfully to black than to

[89] Time to toss the 'Bad apples' excuse, The Minnesota Post, May 31, 2020.
[90] Bad apples come from rotten trees in policing, Brookings, May 30, 2020.
[91] Language from police body camera footage shows racial disparities in officer respect, PNAS, June 20, 2017.

white community members in everyday traffic stops, even after controlling for officer race, infraction severity, stop location, and stop outcome."[92]

There is a saying, "You cannot manage what you do not measure."[93] This is especially true in policing. Data on police stops, arrests, searches, and uses of force cannot be used to measure the level of officer bias or institutional racism in policing. While racial disparities in policing data are often used as a proxy measure for officer bias (i.e. the greater the disparity the more biased the officer must be), it is unreasonable to assume that discriminatory police practices are responsible for 100% of the observed statistical disparities. If we lived in an isolated bubble where everyone behaved in the same manner and offended at the same rates, then we could assume that any disparities observed in policing data would have been caused by differential behavior by police officers. Obviously, the real world is much more complex, and it is not possible to create the type of controlled experimental environment that would be needed to conduct an accurate racial bias analysis.

While it is unreasonable to assume that 100% of observed disparities in policing data are due to officer bias and profiling, it is also unreasonable to conclude that officer bias does not play any contributing role in generating or exacerbating these disparities. Over the last 20 years, racial disparities have been found in virtually every aspect of policing in every law enforcement agency in the country.[94] The debate should not be about whether the disparities exist, but rather determining how much of those disparities are due to individual officer bias and/or institutional racism in the police department.[95] Critics of the police tend to place most of the blame for the racial disparities on biased or racist officers while police departments will typically claim to be professional and unbiased in their actions. Law enforcement often responds to concerns about biased policing by pointing out that they are simply responding to community calls for service

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[92] Id.
[93] "The Two Most Important Quotes In Business," Growthink.com.
[94] "Economics Research on Racial Disparities in Policing," Crime and Criminal Justice, Econofact.org, June 16, 2020.
[95] "Report to the United Nations on Racial Disparities in the U.S. Criminal Justice System," The Sentencing Project, April 19, 2018.

and observed criminal behavior and they cannot take full responsibility for racial disparities that are caused by other parts of society.[96]

Policing Reform in the 21st Century

After Michael Brown was killed by the police in Ferguson Missouri in 2014, there was an immediate and concerted effort to implement policing reforms in an attempt to reduce officer involved shootings and uses of force. Several major initiatives were launched including:

- Body Worn Cameras[97]
- De-Escalation Training[98]
- Implicit Bias Training[99]
- Police Data Initiative[100]
- President Obama's Task Force on 21st Century Policing[101]

While each of these reform measures had positive benefits, none of them produced the systemic changes in policing that the public was looking for. Despite all these reforms, officer involved shootings and uses of force continued at the same rates as before. Racial disparities in policing data were not reduced and, in some cases, even worsened after reforms were implemented.

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[96] "The Police and Public Discourse on "Black-on-Black" Violence," New Perspectives in Policing, National Institutes of Justice, May 2015.
[97] Body cameras are seen as key to police reform. But do they increase accountability? PBS News Hour, June 25, 2020.
[98] Police reformers push for de-escalation training, but the jury is out on its effectiveness, ABC News, July 5, 2020.
[99] NYPD Study: Implicit Bias Training Changes Minds, Not Necessarily Behavior, NPR, September 10, 2020.
[100] Police Data Initiative, Police Foundation.
[101] Final Report of The President's Task Force on 21st Century Policing, May 2015.

After the death of George Floyd in Minneapolis in May 2020, calls for additional police reforms have been made and some were quickly implemented.[102] Due to the nature of Mr. Floyd's death, some local and state governments and police chiefs rushed to ban or limit the use of "choke holds."[103] When police used chemical munitions to quell protests, some elected officials reacted by banning those force options as well.[104] The New York Attorney General issued a report on September 25, 2020, after reviewing a traffic stop that resulted in an officer involved shooting and recommended that the New York Police Department discontinue traffic enforcement as a way to prevent violent encounters with the public.[105]

While it is understandable that politicians and police chiefs would want to react quickly to high profile policing incidents of national concern, most of these significant policy decisions and recommendations were and are being made in the absence of comprehensive data. There is an information vacuum around most aspects of policing. As a result, many of the reforms that have been implemented will not have the intended impacts and may produce unintended and unwanted consequences.

The failure of many policing reforms implemented during the last decade has created a new movement to defund the police.[106] Proposals range from abolishing police departments altogether,[107] to reducing police budgets immediately by 50%,[108] to transferring some policing

[102] "The major police reforms enacted since George Floyd's death," Axios, September 8, 2020.
[103] "Minnesota lawmakers pass sweeping package of police accountability measures," Star Tribune, July 21, 2020.
[104] "Seattle City Council bans police use of tear gas and chokeholds as protests for Black lives continue," The Seattle Times, August 12, 2020.
[105] "New York AG suggests NYPD get rid of traffic stops to prevent deadly force incidents," The Hill, September 25, 2020.
[106] "What does 'defund the police' mean and does it have merit?" Brookings, June 19, 2020.
[107] "Yes, We Mean Literally Abolish the Police, Because reform won't happen," The New York Times, June 12, 2020.
[108] "Defunding Seattle Police by 50% proving complicated for council," Crosscut, July 31, 2020.

services to other departments or community-based organizations.[109] Minneapolis, the location of the murder of George Floyd, just approved a ballot measure that would disband the Minneapolis Police Department and replace it with a new Department of Public Safety that has a broader mission than just law enforcement.[110] These types of dramatic changes to the structure, functions and budgets of police departments are proving to be difficult to implement.[111]

This report is being written at a time of unprecedented conflict and tension between law enforcement and the communities they serve. Concerns about high profile incidents like the killing of George Floyd in Minneapolis have generated thousands of protests across the country and around the world. During this unrest, additional acts of police violence have been captured on video and shared across social media. The police response to peaceful protests and associated incidents of violence, property destruction and looting have been criticized as being excessive and unnecessary.[112] As frustrations and tensions grow, existing police reform measures are viewed as inadequate and ineffective and so a new movement to defund the police began.[113] Advocates for reducing police budgets or eliminating the police entirely are driven by a deep distrust of law enforcement. They have seen prior reform efforts fail to make any difference in the issues they are concerned about.[114] If the police cannot reform themselves, the argument goes, then the police should be defunded so they can do no more harm. Calls to defund the police have threatened the institution of policing and the careers of hundreds of thousands of law enforcement officers. This has created a counter movement to support police departments

[109] "Durkan wants to move 911 dispatchers, parking enforcement outside SPD, criticizes City Council support for deeper defunding," The Seattle Times, July 13, 2020.
[110] "Minneapolis voters will decide whether to replace the police department with a public safety department," CNN, July 24, 2021.
[111] "How a Pledge to Dismantle the Minneapolis Police Collapsed," The New York Times, September 26, 2020.
[112] "Seattle defends protest response, says police did not violate court order," The Seattle Times, October 2, 2020.
[113] "Defunding the Police Will Actually Make Us Safer," ACLU, June 11, 2020.
[114] "Can Cops Unlearn Their Unconscious Biases?" The Atlantic, December 23, 2017.

and officers.[115] As the struggle over policing reform continues, the issue is becoming more political with presidential candidates weighing in on the issue.[116] Clashes on the streets between police and protestors have drawn in unofficial armed groups in support of law enforcement.[117]

[115] "Pro-police rally met with counter protesters ahead of defund vote," KOMO News, August 9, 2020.
[116] "Biden Said, 'Most Cops Are Good.' But Progressives Want Systemic Change," The New York Times, August 19, 2020.
[117] "Why Experts Say The Police Don't Need Militias' Help," National Public Radio, August 27, 2020.

The totality of these circumstances has put an intense strain on the relationship between law enforcement and the communities they serve and has called into question the legitimacy of policing itself. The impacts on policing could be catastrophic according to former Police Chief Cedric Alexander: [118]

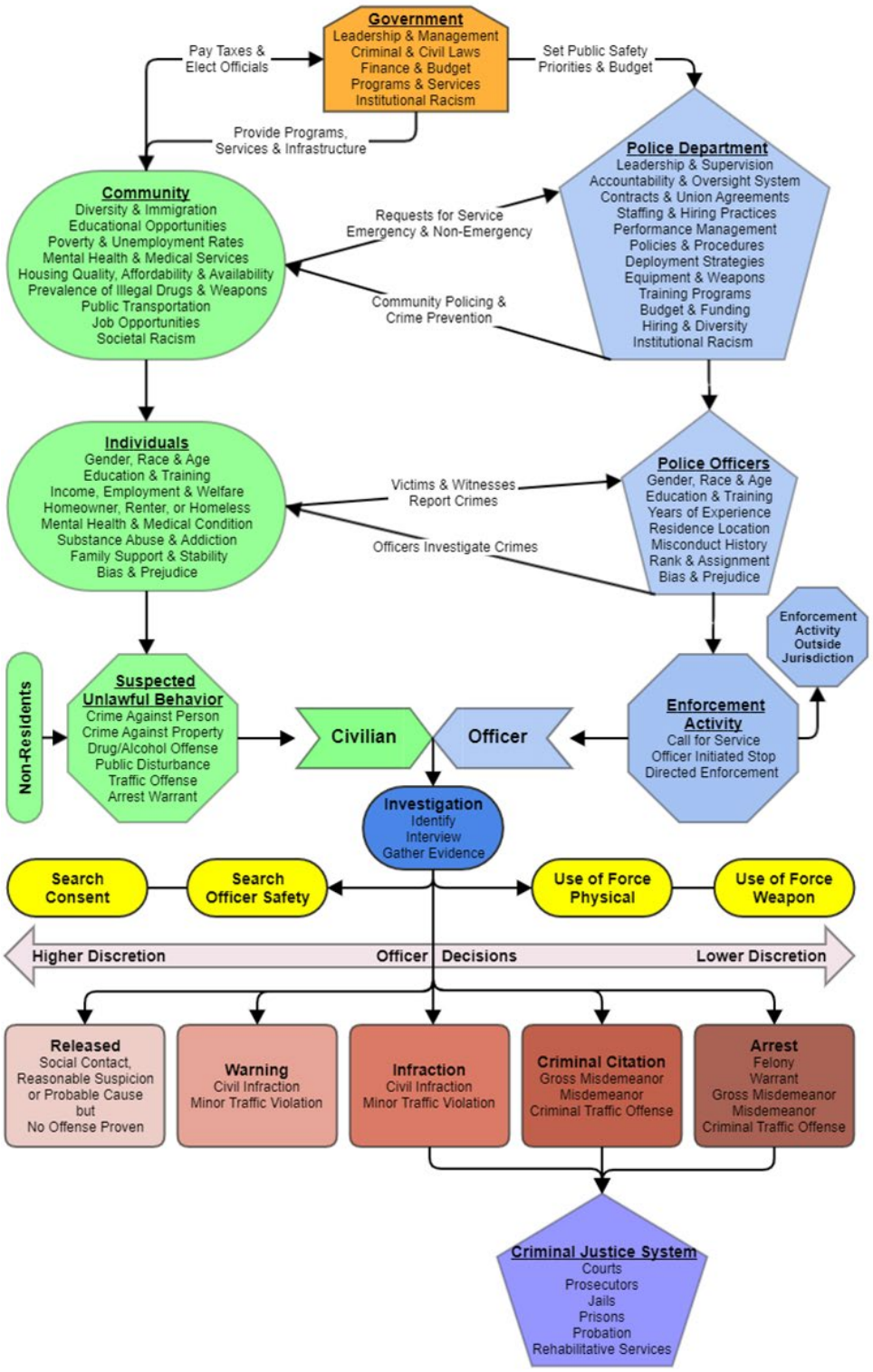
> "To perform their sworn mission, police officers are entrusted with very consequential legal authority, including the authority to use deadly force. But the power behind that authority comes not from any law but from the public. It is the members of the community who grant their officers the legitimacy to perform their mission. Without this grant of legitimacy, the police, for all their legal authority, are essentially powerless."

This is a challenging time for most law enforcement agencies in the United States including Dallas PD. It is also a challenging time to be releasing a report that examines racial disparities in policing. Data from these types of studies is often cherry picked to support both sides of the policing debate. As Mark Twain once said, "There are three kinds of lies: lies, damned lies, and statistics."[119] The goal of this report is not to support any single position or point of view, but instead to provide useful law enforcement data and meaningful context so that the local stakeholders in Dallas can begin to have an informed and data-driven discussion about these controversial issues. There is no quantitative statistic that can confirm or deny the existence of racial bias or racial profiling by police officers. Statistics can be used to identify where racial disparities exist and determine the magnitude of those disparities, but quantitative data alone cannot be used to determine the causes of those disparities. To make causal findings, the data must be examined by those who know what is happening in Dallas: residents, business owners, community groups and organizations, churches, government officials and police officers. Outside

[118] "Ex-police chief: Police should never welcome the help of vigilantes," CNN Opinion by Cedric L. Alexander, September 1, 2020
[119] "Lies, damned lies, and statistics," Wikipedia.

consultants can provide a basic analysis of the data, but they are unable to interpret those results because they do not live or work in the community being studied.

A New Framework for Examining Racial Disparities in Policing



The traditional methodology for examining racial disparities in policing activities is overly simplistic and can produce misleading results. The problems with the traditional disparity analysis are numerous and are outlined in more detail in Appendix B.

For this report we have developed a new framework and methodology for analyzing disparities in policing. This framework takes into consideration the complexities of society, government, policing, and the criminal justice system. The new methodology accounts for the various levels of discretionary decision making by police officers as well as the structural and institutional factors that may impact observed disparities. The analysis in this report is not limited to racial disparities, but also includes an examination of disparities by sex and age.

An analysis of racial disparities in policing cannot be limited to examining the impacts of individual officer bias and discrimination. There are societal, governmental, and departmental factors that may play a significant role in contributing to observed disparities and these structures should be incorporated into the review of the findings from the analysis:

Government

- State and local governments pass criminal and civil laws that the police are responsible for enforcing. If a law has a discriminatory or disparate impact on a particular group, then police actions will reflect and reinforce those impacts.[120]
- Governments set the budgets and staffing levels for police departments. The more resources that are provided, the more law enforcement actions can be conducted.
- Governments provide programs and services for the community. The more support the government provides for at-risk populations, the lower the crime and delinquency rates are expected to be.
- Elected officials and department directors will set the tone for the city. If law and order leaders are elected to run the government then the police department will be expected to

[120] For example, a sit-lie ordinance which prohibits sitting or lying on the sidewalk will have a disproportionate impact on homeless individuals and chronic public inebriates.

follow their agenda. If leaders are chosen who are focused on restorative justice and alternatives to incarceration, then the police department will adapt its practices to reflect those priorities.

- The degree of institutional racism present in governmental structures will also be reflected in the police department and the actions of its officers.

Community

- Police respond to calls for service from the community and the observed unlawful behaviors of residents and visitors to the city. Many societal factors will influence the rates at which individuals engage in criminal behavior including poverty and unemployment rates, housing quality, affordability and availability, educational opportunities, access to health care and public transportation, etc. Many contributing factors of criminal behavior are influenced by structural, institutional, and societal racism. The same racial disparities observed in policing data are also found in housing, health care, education, and the economy.
- Crime rates can vary dramatically between communities with the largest urban centers typically having the highest levels of crime. The community's relationship with the police department will also play a role in this dynamic. If the public has trust and confidence in their local police officers, they will be more likely to report crimes and cooperate with criminal investigations.

Police Department

- A police department has a great deal of control over the actions of its officers and can provide clear direction on the expectations for professional behavior. This influence is exerted through policies, training, supervision, and accountability systems.
- The department will set staffing levels and determine deployment strategies.
- The department will provide equipment, weapons, and tools for officers to use.

- Leadership and management will establish the tone and culture for the department and will decide what type of individuals will be hired as police officers.
- The department will interact with government officials and the community to set the priorities for law enforcement activities.

Individual Community Members

Most criminal behavior is unorganized and may be dependent on the characteristics of the individual. Certain factors may contribute to an increased propensity to commit crimes including substance abuse and addiction, poverty, mental health and medical conditions, lack of family support, unemployment, and poor education.

Police Officers

Like members of the community, an officer's behavior will be impacted by their personal background and experience. Officers can have mental health and substance abuse issues as well as bias and prejudice that could negatively impact how they conduct themselves on the job.

Officer-Civilian Interactions

Officers may encounter members of the community in a variety of ways:

- They may be called by victims or witnesses of criminal activity, or they may be asked to help with non-criminal emergencies or problems.
- Officers may stop individuals when they observe unlawful behavior, or they believe the suspect was previously engaged in criminal conduct.
- Officers may be directed to interact with the public for a specific reason such as community policing or DUI emphasis patrols.
- The type of interaction between an officer and a civilian will depend on the severity of the offense being investigated. This can range from a homicide investigation (violent felony) to making a traffic stop for a defective taillight (civil infraction). Officers may also contact

individuals who are not currently engaging in criminal activity but have an active warrant for their arrest.

Police Investigation

After an officer contacts a person who is suspected of engaging in unlawful behavior, the officer will investigate to determine what happened and then decide what the most appropriate law enforcement action should be. This will involve identifying the suspect and running a criminal history and warrants check, interviewing the suspect, victims, and witnesses, and gathering evidence. The quality of this interaction will depend on the demeanor and professionalism of the officer and the level of respect and cooperation from the suspect, victim, and witnesses. If either side fails to act in an appropriate manner, the situation can deteriorate rapidly leading to adverse actions such as the use of force. While conducting the investigation, the officer has the discretion to ask the suspect for consent to search the suspect's person and/or vehicle. The officer may also conduct a pat down search for weapons if there is reason to believe that the suspect may be armed or dangerous.

Final Law Enforcement Action

Once the investigation has been completed, the officer must decide what type of law enforcement actions to take if any. This can range from releasing a person with a warning to making an arrest and booking the person into jail. The type of law enforcement action taken and the level of discretion available to the officer will depend on the type of offense involved. For example:

- There are some domestic violence crimes where state law requires the officer to make an arrest and book the person into jail.
- If an officer contacts a person who has committed a violent felony it is unlikely the suspect will be released with a warning.
- If the officer stops a driver for speeding the officer only has an option of writing an infraction or giving a warning since speeding is not a criminal offense.

Examining how officers choose to exercise their discretion is a critical component of any disparity analysis.

Criminal Justice System

If an officer makes an arrest or issues a criminal citation or civil infraction, then the suspect will enter the criminal justice system as a defendant. As the defendant works his way through the system, he will be impacted by the discretionary decisions of prosecutors, judges, juries, probation officers and jail guards. Each of these decisions has the potential to be influenced by racial bias and prejudice which may impact the disparities observed in the data.

Given the complexities of the entire framework for policing, it is expected that demographic disparities by age, race and sex will be observed when compared with the underlying population. While these disparities are often viewed as a negative outcome of law enforcement practices, it is not possible to address these disparities by focusing solely on individual officer behavior. Instead, it is necessary to examine the entire framework and identify those areas that have the greatest impact on disparities so that effective corrective measures and reforms can be implemented.

Quantity of Policing vs Quality of Policing[121]

Racial disparity studies in policing tend to focus exclusively on the quantity of policing and the size of the racial disparities observed. The problem with this type of analysis is that it can lead to a considerable number of both false positive and false negative findings. If an officer stopped a disparate number of individuals in a particular racial group, that officer would be flagged as potentially biased even if all the officer's actions were lawful, fair, and unbiased. Similarly, an officer who does not have racially disparate stop statistics would be assumed to be an unbiased officer even if the officer used racial slurs during every stop involving a person of color.

To illustrate this point, here is a hypothetical example of two officers named Officer Fair and Officer Bias who work for the Mayberry Police Department. The City of Mayberry has a population of 100,000 where 30% of city residents are Black and 70% are White. Over the last 12 months Officer Fair and Officer Bias each used force ten times. Officer Fair used force against 4 White subjects and 6 Black subjects, and each use of force was necessary, constitutional, and within policy. Officer Fair always acts professionally and respectfully with every person he arrests. Officer Bias used force against 7 White subjects and 3 Black subjects, and each use of force was found to be necessary, constitutional and within policy. However, Officer Bias is biased against Black people and that bias is reflected in several different ways. Officer Bias is disrespectful towards Black subjects and uses profanity and a harsh tone with Black arrestees. Although Officer Bias does not engage in excessive force that is a violation of policy, he tends to use higher levels of force against Black subjects than White subjects. The Police Department where the officers work has an Early Warning System that flags officers who have a disproportionate number of contacts with people of color. The system flagged Officer Fair for engaging in potentially discriminatory behavior.

[121] The quality of policing is often referred to as "procedural justice."

Risk Ratio Example

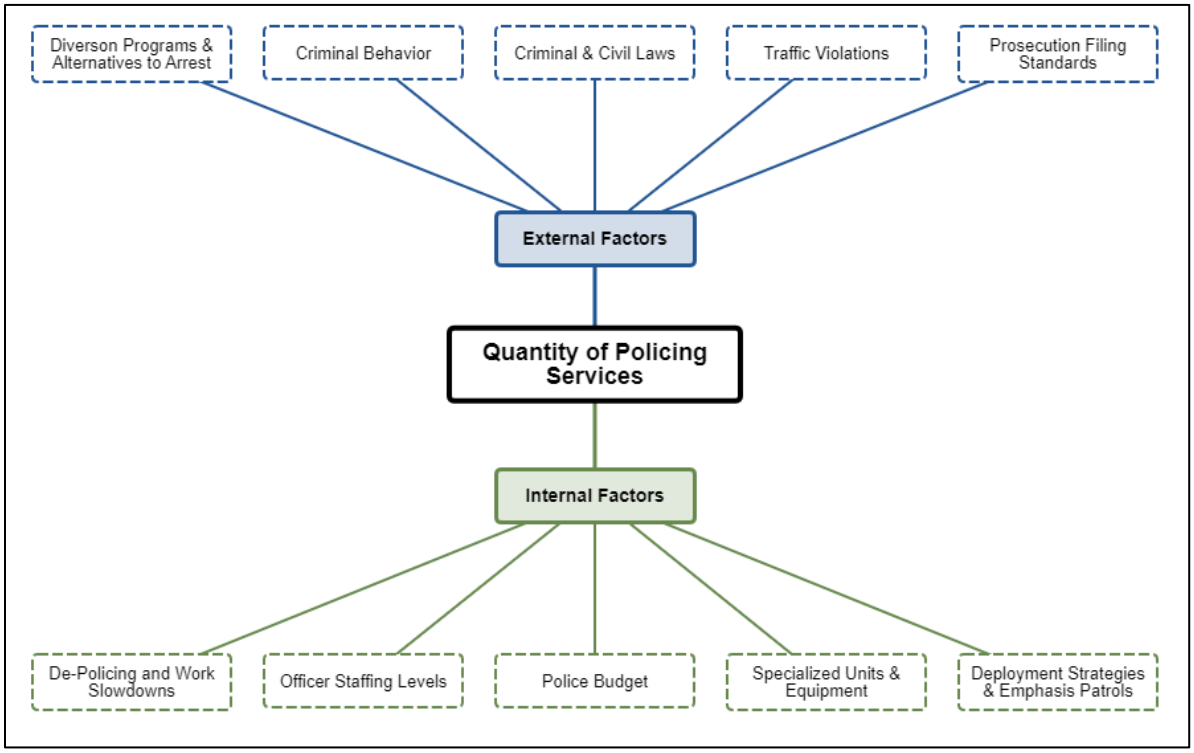
		Uses of Force		Risk Ratio UOF/Population	
Subject Race	**Population**	**Officer Bias**	**Officer Fair**	**Officer Bias**	**Officer Fair**
White	70%	70%	40%	1.0	0.6
Black	30%	30%	60%	1.0	2.0

If the disparity analysis is based solely on the racial composition of use of force subjects for each officer and these numbers are compared to the population, then a high racial disparity would be an indication of racial bias. Based on the numbers, Officer Fair would be identified as biased while Officer Bias would be seen as unbiased. Officer Fair used force against Black subjects twice as often as we would expect based on the population and twice as often as Officer Bias.

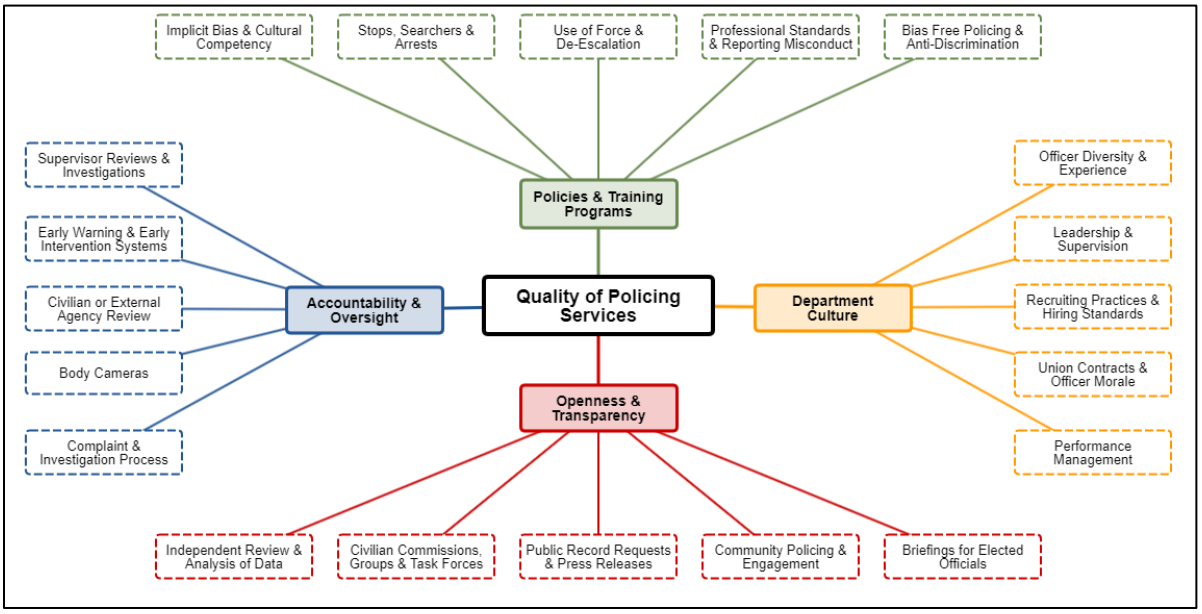
The disparity analysis would flag Officer Fair as potentially engaging in racial profiling (false positive) while Officer Bias would be ignored by the system even though he is engaged in biased and unprofessional behavior (false negative).

The quantity of policing is driven by factors that are external to the department such as criminal behavior as well as internal factors like police budgets and staffing. It is difficult for police chiefs to have an impact on the quantity of policing through traditional reform measures. On the other hand, police departments have a great deal of influence over the quality of policing through their policies, training, accountability systems and supervision. Openness and transparency can also improve the community's perception of the department.

Factors Impacting the Quantity of Policing Services

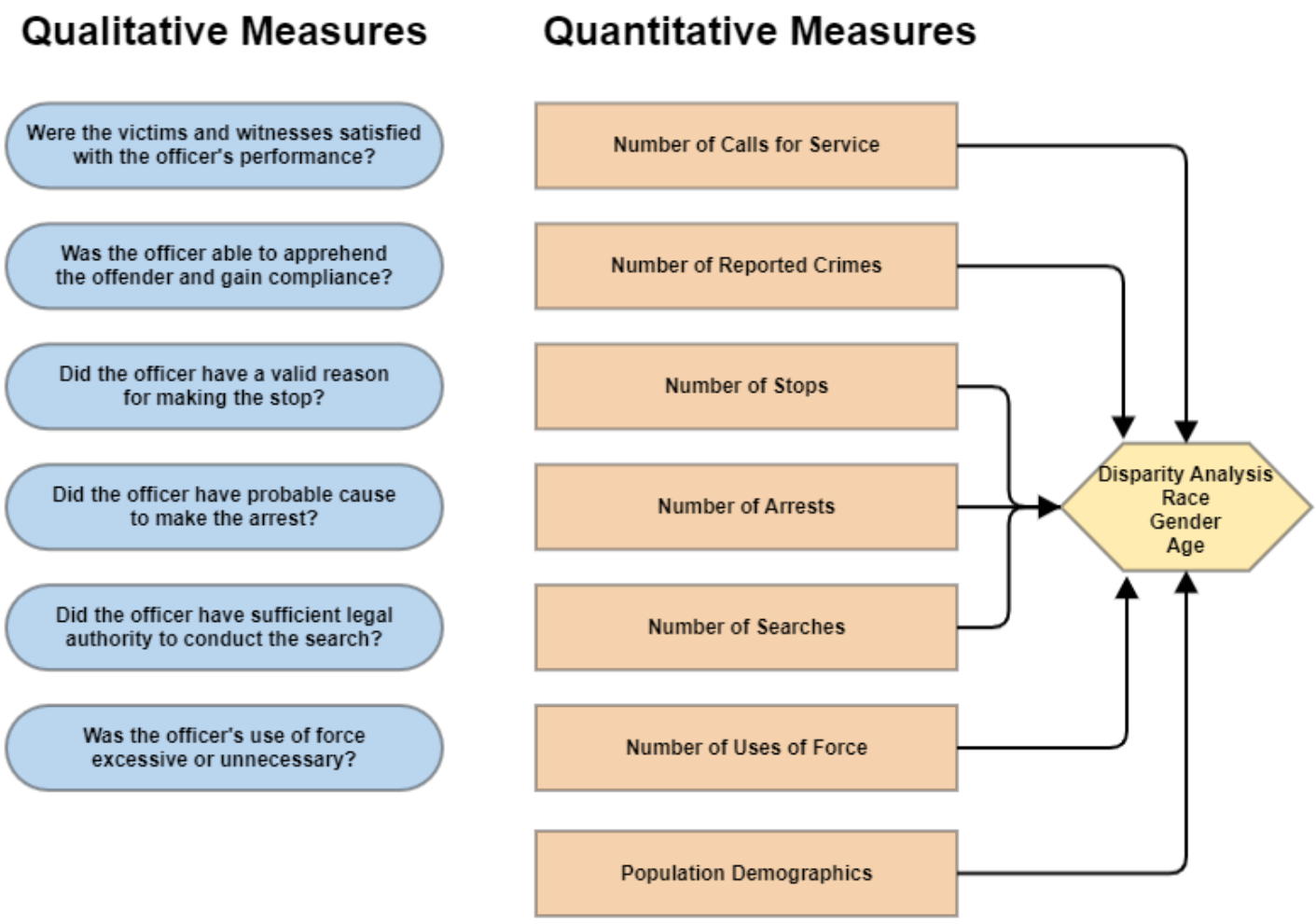


Factors Impacting the Quality of Policing Services



Racial disparity studies typically focus exclusively on quantitative measures. These studies will count the number of calls for service, the numbers of stops, arrests, uses of force, etc. This type of quantitative data can answer some questions about racial disparities, but to do a thorough assessment of the issue, qualitative data must also be collected and incorporated into the analysis.

Evaluating Police Performance



Procedural Justice

When we speak about the quality of policing, we are referring to procedural justice. Procedural justice speaks to four principles, often referred to as the four pillars: 1) being fair in processes, 2) being transparent in actions, 3) providing opportunity for voice, and 4) being impartial in decision making. While a detailed examination of procedural justice issues is beyond the scope of this study, many resources are available online[122] and we recommend that Dallas PD focus on procedural justice issues in future studies.

Discretion vs Discrimination

We have refined the disparity analysis even further by examining demographic disparities in the context of officer discretion. If disparities are present in activities where the officer has a high degree of discretion, this could be a strong indicator that racial bias is present or racial profiling is occurring. On the other hand, if the same level of disparity is present in low discretion activities, it is less likely that officer bias is contributing to those disparities.

Police Bias Risk Matrix

		Racial Disparity		
		Positive	None	Negative
Officer Discretion	High	High Risk of Bias	Medium Risk of Bias	Low Risk of Bias
	Medium	High Risk of Bias	Medium Risk of Bias	Low Risk of Bias
	Low	Medium Risk of Bias	Low Risk of Bias	Low Risk of Bias

[122] Procedural Justice and Police Legitimacy Resources, California Commission on Peace Officer Standards and Training

If a department desires to change officer behavior in an area where officers are able to exercise a high degree of discretion, officer behavior can be modified through policy changes, training, supervision, and accountability. By contrast, modifying officer behavior in low discretion situations may require changes to the laws or regulations that limit the officer's discretion. In addition, there may be ways to limit an officer's exposure to some types of situations that lead to unwanted outcomes. For example, some agencies have implemented restrictions[123] on an officer's ability to pursue eluding vehicles and fleeing suspects.[124]

[123] "Why High-Speed Police Chases Are Going Away," Popular Mechanics, May 30, 2013.
[124] 13.031 - Vehicle Eluding/Pursuits, Seattle Police Department Manual.

Glossary

Abbreviation	Name
AR	Absolute Risk
DOJ	United States Department of Justice
DPD	Dallas Police Department
DUI	Driving Under the Influence
ECW	Electronic Control Weapon
EEOC	Equal Employment Opportunity Commission
FBI	Federal Bureau of Investigations
IACP	International Association of Chiefs of Police
IAPro/BlueTeam™	Use of force records management system used by Dallas PD
ITS	Dallas Information and Technology Services
LNR	Lateral Neck Restraint
NACOLE	National Association for Civilian Oversight of Law Enforcement
NIBRS	National Incident Based Reporting System
OC	Oleoresin Capsicum (pepper spray)
OR	Odds Ratio
PBC	Population Based Calculation
PERF	Police Executive Research Forum
PFAN	Police Force Analysis Network℠
PFAS	Police Force Analysis System℠
PNAS	Proceedings of the National Academy of Sciences of the United States of America
RR	Relative Risk or Risk Ratio
URSUS	California's Use of Force Data Collection Program