Burlington Police Department
2021 Annual Report[*]

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Executive Summary

This is the second Annual Report of the Burlington Police Department (BPD), and contains information on six subject areas: individuals who interacted with the police, incidents and offenses, pedestrian stops, traffic stops, arrests, and uses of force. The report's goals are (i) to provide more information about the BPD to the community; (ii) to document racial disparities in policing; and (iii) to help identify, where possible, the causes of those disparities. Prior to 2021, information on several of these topics were presented in individual reports, which can be found on the BPD website at `https://www.burlingtonvt.gov/Police/Data/Reports`.

Some of the key findings from each section of the report have been summarized below. In addition to the sections named above, the report also contains an opening section with definitions of terms used throughout this report, and an appendix with additional analyses. Although the BPD has a long history of independently reporting policing metrics, the specific metrics presented within this report mainly follow the outline of a motion passed by the Police Commission on January 26, 2021 (`http://go.boarddocs.com/vt/burlingtonvt/Board.nsf/goto?open&id=BXHT5475A04E`), with some additional analysis.

There are some notable differences in how the data were analyzed compared to the 2020 report, including:

- The 2020 report over-counted arrests where the arrestee was arrested once for multiple crimes.

- The 2020 report used an algorithm to identify traffic stops. The current report uses a modified algorithm for year-to-year trends, but uses a combination of algorithms and human auditing to identify traffic stops in 2021.

Key findings from Sections 2 through 7 of the report are summarized below.

People

- In 2021, Burlington police officers interacted with 16,956 individuals. Approximately 53.5% were residents of Burlington, and 37.9% were residents of another Vermont town.

- Approximately 2% of these individuals were involved in approximately 20% of person-incidents. Involvement can take many forms other than suspect or arrestee; other involvement types include victim, family member, and caller.

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[*]This is a corrected version of the 2021 Annual Report. The Appendix describes how this report differs from the version published on BoardDocs on May 20, 2022.

Incidents and Offenses

- BPD recorded 21,570 incidents in 2021, down 8.5% from 23,584 in 2020. This continues a trend in decreasing incidents, attributable to decreases in traffic stops, reported retail theft, and foot patrols.

- There were 2,567 Priority 1 incidents in 2021, which represents a 17.1% increase from 2,193 in 2020. Priority 1 incidents are the most urgent incident types according to BPD's Priority Response Plan.

- There were 3,767 crimes recorded in 2021, up 10.2% from 3,418 in 2020. Of the 3,767 crimes in 2021, 382 were violent.

Pedestrian Stops

- There was one officer-initiated pedestrian stop in 2021. The pedestrian was a White male.

Traffic Stops

- Traffic stops have been decreasing steadily since 2015. Across race, most stops are for moving violations.

- Officers made 680 traffic stops in 2021; 586 were of White drivers, and 49 were of Black.

- The proportion of Black drivers stopped (7.3%) is lower than their share of the driving population (10.6%), as estimated by crash data.

- Approximately 76.1% of traffic stops resulted in a warning rather than a ticket or an arrest. There was no statistically significant difference in outcomes of stops between White and Black drivers.

- There were seven searches of cars in 2021. One driver was White; two drivers were Black; two drivers were Asian; and two drivers did not have race recorded.

Arrests

- Arrests have been decreasing since 2016.

- BPD made 987 arrests in 2021, down 14.0% from 1,148 in 2020.

- Across race, most arrestees are cited, meaning they are assigned a court date but not detained until that court date. Approximately 4.3% of incidents result in an arrest.

- Approximately 75.8% of arrestees in 2021 were White and 20.5% were Black.

- Black arrestees for violent crimes have about the same risk of being the subject of force as White arrestees of violent crime. Black arrestees for non-violent crimes are more likely to be the subject of force than White arrestees of non-violent crime.

Uses of Force

- There were 188 uses of force in 2021, up 17.5% from 160 in 2020.

- Of the 187 uses of force in 2021 where race was known, 112 (59.9%) were against White people and 68 (36.4%) were against Black people.

- For White subjects of force, the most common type of force is empty hand controls. For Black subjects, the most common type is pointing a firearm.

- Approximately 15.4% of subjects of force are injured; White subjects are more likely to be injured than Black subjects.

The data analysis was completed by and the report was composed by staff in the Office of City Planning, and the leadership of the BPD had an opportunity to offer feedback.

Contents

1 Introduction

1.1 Background

This report presents information on the Burlington Police Department's (BPD's) activities in calendar year 2021. Most of its contents respond directly to requests made in a motion (hereafter, "the Motion") passed by the Burlington Police Commission on January 26, 2021 [1]. These requests fall into five subject areas: incidents and offenses; pedestrian stops; traffic stops; arrests; and uses of force. Although much of this particular report was structured around the Motion, the BPD has a long history of producing reports on these subject areas. Since 2016, BPD has released one other annual report [2], as well as at least three traffic reports, four reports on uses of force, two reports on arrests or arraignment, and a report on diversity and recruitment. These documents can be found at `https://www.burlingtonvt.gov/Police/Data/Reports` and `https://www.burlingtonvt.gov/Police/older_resources`. BPD has also released de-identified data for several years. These data can be found in the dashboard at `https://www.burlingtonvt.gov/Police/Data` and on the city's open data portal at `https://data.burlingtonvt.gov/`. De-identified summaries of every use of force since January 2021 can be found at `https://www.burlingtonvt.gov/police/use_of_force_reports`.

1.2 Data Sources

Unless otherwise specified, the data in this report come from Valcour, which is the BPD's computer-aided dispatch and records management system (CAD/RMS). Burlington has used Valcour since the end of 2011, but this report does not include information on police incidents that occurred prior to January 1, 2012.

Valcour is primarily an operational tool, not a research one. Because of this, most of the fields in Valcour and their options have no standardized definitions with explicit inclusion and exclusion criteria. The exceptions to this are fields that get submitted to the FBI as part of the National Incident-Based Reporting System, or NIBRS. There is a manual for NIBRS fields, and the submitted data are regularly audited. Most fields and checkboxes, though, are not reported through NIBRS, and thus are filled out according to the interpretations of the many people, with many different roles, who have editing privileges in Valcour. Most sections of this report contain subsections on data quality, which identify the specific ways different data fields may not represent what they are intended to represent. The purpose of these subsections is to provide transparency, to allow readers to evaluate the results in light of the accuracy of the data, and to highlight opportunities for improvement.

In addition to Valcour, this report uses Census data as a benchmark for racial shares of arrests and uses of force. For example, the percentage of arrestees who are Black is compared to the percentage of Burlingtonians who are Black, as reported in the Census. The United States Census Bureau provides information on Burlington through two surveys: the Decennial Census and the American Community Survey. The Decennial Census is conducted every ten years and counts every person in America. It was last conducted in 2020. The American Community Survey (ACS) is conducted every year and is administered to only a sample of people. In order to maximize the number of people on whom inferences can be based, the ACS aggregates across five years for cities of Burlington's size. So, for example, the 2020 ACS reports on Burlington for the years 2016 through 2020, not just 2020. Inferences are then made from the sample to the full population. Since estimates from the ACS are based on a sample, they have margins of error. Since data from the 2021 ACS have not been released yet, this report will generally use 2020 Decennial Census data as a base for comparisons to 2021 Valcour data.

For traffic stops, this report uses crash data as a benchmark. For example, the percentage of stopped drivers who are Black is compared to the percentage of operators in crashes in Burlington who are Black. The reasons for using crash data and not Census data for this purpose are listed in the Traffic Stops section.

The data on uses of force come from two sources: FACTS and Valcour. FACTS was used at least as early as 2012 and was retired in 2019, when the BPD switched its use-of-force tracking to Valcour. On May 1, 2022, the BPD switched again, this time to Benchmark. This report does not cover uses of force in 2022, and so does not use information from Benchmark.

The final data source is an internal BPD spreadsheet that is used to track gunfire. Valcour does not currently have a mechanism for tracking gunfire in the City of Burlington, so BPD staff track it separately.

1.3   Terms

Incident   An incident is the primary unit of police activity; it is sometimes referred to as a "call", even though not every incident originates with a phone call. It may be useful to think of an incident as a file folder that is created and time-stamped when the police activity is initiated. As information is gathered about the activity, it is stored in the folder. Any BPD employees who work on the incident will have their names attached to the incident; these employees could be police officers, Community Service Officers (CSOs), Community Support Liaisons (CSLs), forensic analysts, etc. Any non-officers who are involved (for example, as victims, suspects, operators, etc.) will also have their names and information linked to the incident. If any crimes are committed as part of the incident; if anyone is arrested; if force is used; or if evidence is collected, this information will be stored in the incident as well.

Incident Type   This is also known as a "call type". Each incident, when created by dispatch, is put into one of over 130 categories. A list of these categories is included in each Chief's Report that is presented at Police Commission meetings (e.g., `http://go.boarddocs.com/vt/burlingtonvt/Board.nsf/goto?open&id=CDQMLB5B1D21`), but some common incident types are "Mental Health Issue", "Overdose", "Vandalism", "Intoxication", and "Community Outreach". Although an incident's type can be changed (for example, if a crash gets recategorized as a DUI), each incident can only have one type at a time.

Priority Levels   Each incident type is categorized as Priority 1, 2, or 3. Priority 1 incidents are the most urgent, and include things like arson, assault, overdose, and robbery. Priority 3 incidents are the least urgent, and include things like vandalism, forgery, animal problems, and motor vehicle complaints. Priority 2 incidents are in the middle, and in fact some Priority 2 incidents may be elevated to Priority 1 or downgraded to Priority 3 depending on the specific circumstances of the incident. A complete list of incident types and the corresponding priority levels can be found in the BPD's Priority Response Plan [3].

Person and Person-Incident   There are two ways of counting people who interact with the police: persons and person-incidents. For the sake of this report, a person is a unique first name/last name/date of birth combination. Sometimes, multiple people interacting with BPD have the same first name, last name, and date of birth, but this happens rarely enough to use first name/last name/date of birth as a proxy. A person-incident is a unique incident number/first name/last name/date of birth combination. If someone interacted with the police fifty times in 2021, they would only count as one person but fifty person-incidents. If five people are all involved in the same incident in 2021, that counts as once incident but five person-incidents.

Officer-Incident   This is a unique combination of badge number and incident number. It's relevant for uses of force, because multiple officers may use force against the same individual in the same incident.

Offense   An offense is a crime. Not every police incident involves the commission of a crime, but every crime is attached to a specific incident in Valcour. Offenses and charges have the same categories.

Arrest Types   In Valcour, there are five mutually exclusive types of arrest: citation, lodging, arrest on warrant, warrant request, and referral to the CJC.

Citation and Lodging   Citations and lodging are governed by Rule 3 of the Vermont Rules of Criminal Procedure [4]. If an officer has probable cause to believe a person has committed or is in the process of committing a felony, or if an officer has probable cause to believe a person has committed or is in the process of committing a misdemeanor in the presence of the officer, the officer can take the person into custody or "lodge" them. This involves bringing the person to a police facility for fingerprinting, photographs, and paperwork. If, however, an officer has probable cause to believe someone has committed or is in the process of committing a misdemeanor but not in the officer's presence, the officer can only issue a citation. (There are some exceptions to this, like when the crime is stalking or cruelty to a child. A full list of exceptions is

in Rule 3, section (c).) A citation is a piece of paper, signed by the officer, that specifies when and where the recipient must appear in court.

The line between citations and lodgings is blurry. For example, some cited arrestees are fingerprinted and photographed. This might happen if, for example, there is a large fight. If officers were to issue citations and then leave, the combatants might continue fighting. So, officers might take the combatants to the police station for fingerprinting and photographs, releasing each person with a citation as they complete the process.

Also, many people who are lodged are subsequently released. In fact, in order for an arrestee to remain in custody, they must "be brought before the nearest available judicial officer without unnecessary delay" (Rule 3, section (g)). If court is in session, the arrestee is brought to court for their arraignment; if court is not in session, the officer can call a judge. In this case, the judge decides whether the arrestee will be released on conditions and given a later date to appear in court for arraignment; will be required to post bail; or will be held without bail until their arraignment. In reviewing this report, BPD leadership emphasized that no arrestee may be lodged without judicial review and approval.

Warrant Request and Arrest on Warrant If an officer has probable cause to arrest someone but cannot locate them, the officer can request a warrant. If the warrant request is approved, and a Vermont law enforcement officer (at BPD or another agency) encounters the suspect, that officer is obligated to arrest the suspect. Similarly, BPD officers must arrest someone they encounter who has an arrest warrant from another Vermont agency.

Community Justice Center (CJC) The final arrest type in Valcour is referral to the Burlington Community Justice Center (CJC). The CJC is a division of the City of Burlington's Community and Economic Development Office, and provides opportunities for alternative forms of justice, including restorative justice. Some offenses are ineligible for referral to the CJC; for example, the so-called "Big 12" offenses outlined in 33 V.S.A. § 5204 [5], including murder, kidnapping, and sexual assault, are not eligible for CJC referral. If someone is referred to the CJC but does not complete their program, they are cited to appear in court, but their "Arrest Type" remains referral to the CJC.

Charge A crime that an arrestee is accused of committing. A single arrestee may be arrested on multiple charges, meaning they are accused of committing multiple crimes. Offenses and charges have the same categories.

Expunge When a charge is expunged, any information that might identify the person accused of that crime is removed from Valcour. The charge remains listed in Valcour, along with the date and time of the arrest, but the name, date of birth, race, gender, etc., of the person arrested on that charge are removed.

Externally-Generated Traffic Stop An externally-generated traffic stop is a traffic stop that an officer makes because an outside source implores them to do so. It contrasts with a stop that an officer makes based on their own discretion. A good example of an externally-generated stop from 2021 was the stop of a driver who had been observed pointing a gun at another vehicle. The driver of the other vehicle reported this to police, and officers pulled over the driver with the gun. An example of a discretionary stop is when an officer observes a driver cross over the yellow line and pulls that driver over. The reason for separating internally- from externally-generated stops is to focus on the question of bias on the part of the officer. For externally-generated stops, the officer does not have discretion, so there is not an opportunity for bias. for internally-generated stops, the officer has more discretion, so there is an opportunity for bias.

Force According to the BPD's Department Directive 05 [6], force is "[p]hysical coercion employed by a law-enforcement officer to compel a person's compliance with the officer's instructions. For the purpose of this policy, this includes all law-enforcement actions beyond compliant handcuffing."

Active Resistance "A subject using physical activity to resist or take affirmative action to defeat an officer's ability to take them into custody or to seize them, but the subject's actions would not lead a reasonable officer to perceive a risk of physical injury to the officer, the subject, or a third person. Examples

of active resistance include pulling away, escaping or fleeing, struggling, and not complying on physical contact." [6]

Passive Resistance "A subject who takes no affirmative action to defeat police efforts to make an arrest but who does not respond to verbal commands and may refuse to move by sitting down, acting as 'dead weight' or similar." [6]

Deadly Force "Any use of force that creates a substantial risk of causing death or serious bodily injury. Also referred to as lethal force." [6]

Assaultive Assaultive behavior is that which creates an imminent risk of physical injury to the subject themselves, the officer, or a third party, but not a risk of death or serious bodily injury [2]. Examples of assaultive behavior in 2021 include pushing, shoving, and punching.

2   People

Table 1 displays the racial composition of Burlington in 2020, according to the Decennial Census. It highlights an important point, namely that the Census allows respondents to select multiple categories when identifying their race. The column labeled "This Category Alone" separates people who identified as only one race from people who identified as more than one; the column labeled "This Race and Maybe Another" shows the percentage of people who selected a given race, irrespective of whether they also selected another. (The Census calls this "Race alone or in combination with one or more other races".)

Category	This Category Alone		This Race and Maybe Another	
	N	%	N	%
Total	44,743	100.0%	44,743	100.0%
White	36,778	82.2%	39,428	88.1%
Black or African American	2,155	4.8%	2,778	6.2%
American Indian and Alaska Native	104	0.2%	830	1.9%
Asian	2,421	5.4%	3,047	6.8%
Native Hawaiian and Other Pacific Islander	3	0.0%	44	0.1%
Some other race	502	1.1%	1,608	3.6%
Two or more races	2,780	6.2%	N/A	N/A

Table 1:   **Racial composition of Burlington in 2020.** These data come from the Decennial Census. The values in "This Category Alone" denote Burlingtonians who identify in the respective category and no other. For example, 82.2% of Burlingtonians identified as "White alone." The values in "This Race and Maybe Another" denote Burlingtonians who identify in the respective category, but may also identify as another race as well; they do not sum to 100% because they are not mutually exclusive.

Of course, it is not just residents of Burlington who interact with the BPD. Table 2 shows the residence of people who were involved in at least one police incident in 2021. The majority of people who interacted with the police in 2021 (53.5%) were residents of Burlington. Burlington residents make up an even greater share of person-incidents (61.2%), implying that people with multiple police incidents in 2021 were more likely to be Burlington residents.

Residence	Persons		Person-Incidents	
	N	%	N	%
Total (including missing values)	16,956	N/A	31,840	N/A
Total (excluding missing values)	16,068	100.0%	30,829	100.0%
Burlington	8,595	53.5%	18,878	61.2%
Vermont, not Burlington	6,088	37.9%	10,230	33.2%
Not Vermont	1,385	8.6%	1,721	5.6%
Missing address	888	N/A	1,011	N/A

Table 2:   **Residence of people interacting with the police in 2021.**

Table 3 displays the racial composition of people who interacted with the police in 2021. These interactions can take many forms, including as a caller, victim, suspect, arrestee, operator, owner, family member, or person of interest, among others. It's important to note that in Valcour, each person can only have one race. This differs from the Census, which allows respondents to select multiple races. Comparing Table 1 to Table 3, Black Burlingtonians are over-represented in people interacting with the police, whereas Asian Burlingtonians are under-represented.

| | All People | | | | Burlingtonians | | | |
| | Persons | | Person-Incidents | | Persons | | Person-Incidents | |
Race	N	%	N	%	N	%	N	%
Total (including missing values)	16,956	N/A	31,840	N/A	8,595	N/A	18,878	N/A
Total (excluding missing values)	13,735	100.0%	28,020	100.0%	7,302	100.0%	17,186	100.0%
White	11,938	86.9%	23,953	85.5%	6,281	86.0%	14,550	84.7%
Black	1,226	8.9%	3,111	11.1%	667	9.1%	1,998	11.6%
American Indian	14	0.1%	22	0.1%	8	0.1%	13	0.1%
Asian	483	3.5%	832	3.0%	309	4.2%	577	3.4%
Pacific Islander	8	0.1%	8	0.0%	4	0.1%	4	0.0%
Some other race	66	0.5%	94	0.3%	33	0.5%	44	0.3%
Missing race	3,221	N/A	3,820	N/A	1,293	N/A	1,692	N/A

Table 3: **Race of people interacting with the police in 2021.**

Finally, Figure 1 shows what percentage of person-incidents in 2021 are attributable to what percentage of people. Person-incidents are not evenly distributed among people; approximately 2% of persons accounted for approximately 20% of person-incidents in 2021. When interpreting this plot, it is important to remember that there is a wide variety of involvement types; although "suspect", "person of interest", and "arrestee" are involvement types, so is "victim". Thus, this figure does not necessarily show that a small group of people is responsible for a large percentage of crime, just that a small group of people are involved in a large percentage of police incidents.
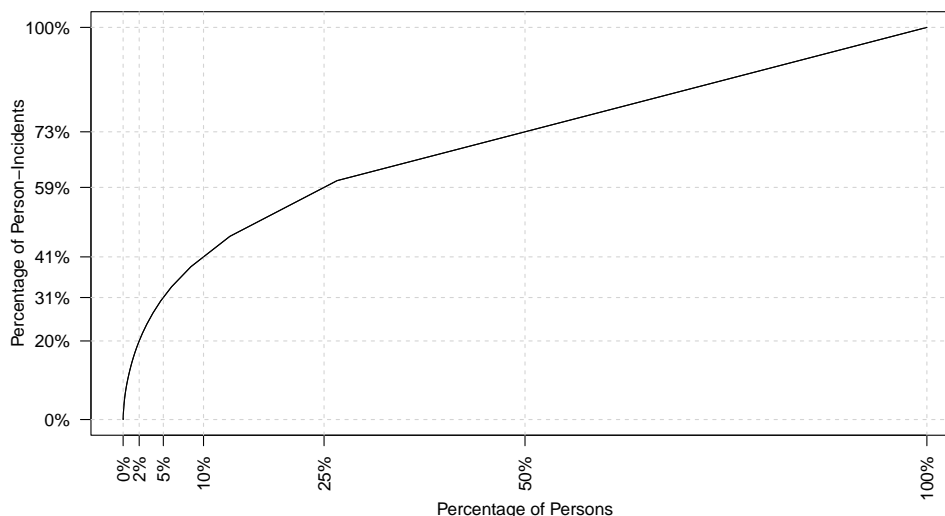

Figure 1: **Distribution of person-incidents among persons in 2021.** Approximately 2% of persons accounted for approximately 20% of person-incidents in 2021; approximately 5% of persons accounted for approximately 31% of person-incidents in 2021; and so on.

3 Incidents and Offenses

3.1 Incidents

An incident is the primary unit of police activity. Figure 2 shows that the number of incidents has decreased steadily from a high in 2015. The same figure shows that Priority 1 incidents (the most urgent) decreased steadily from 2014 to 2020. In 2021, Priority 1 incident counts returned to approximately the same level as in 2016.
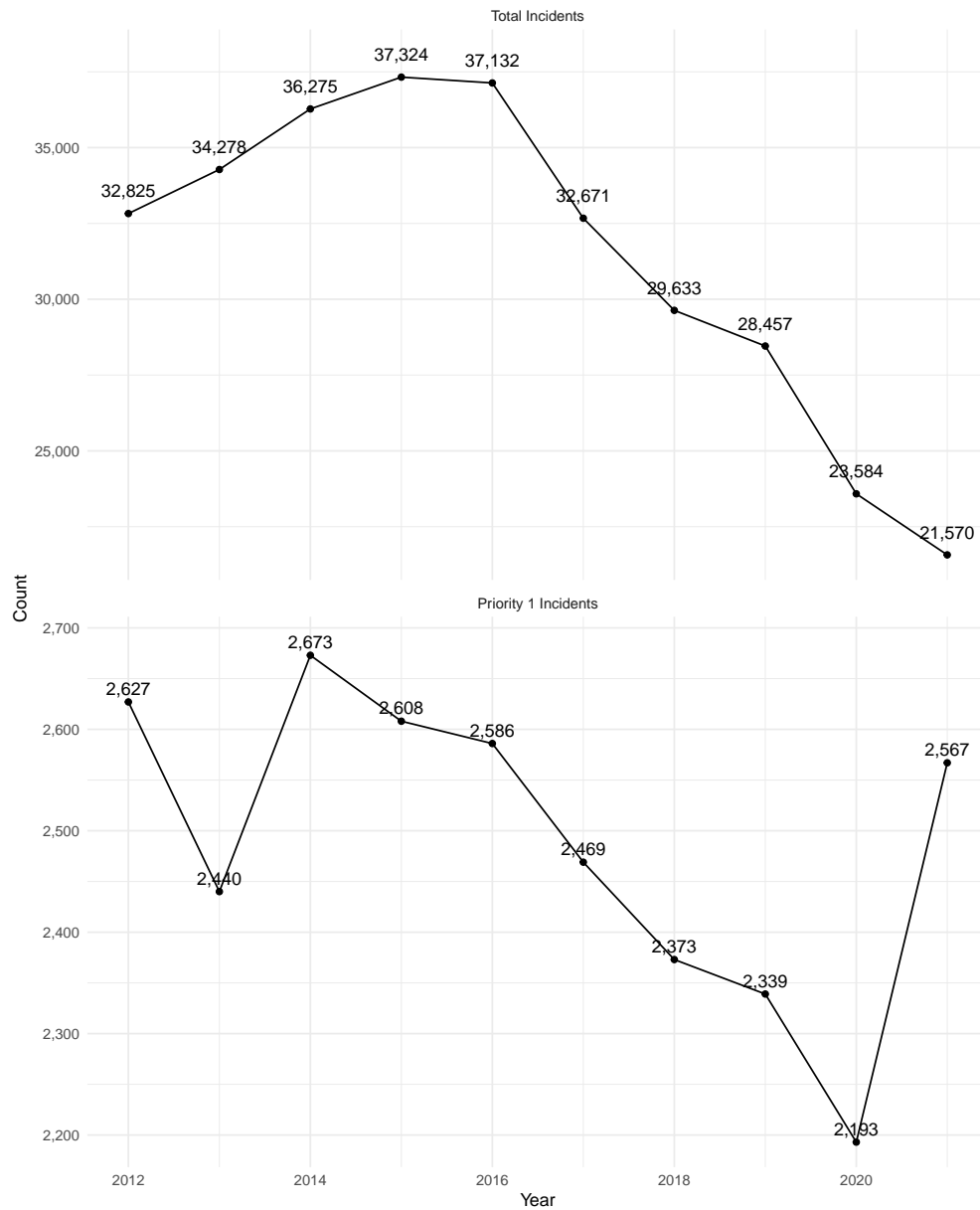

Figure 2: **Number of incidents per year.** Note that the vertical or y-axis of each plot is different.

Figure 3 shows the five incident types that had the highest counts in 2021, and how counts of those incident types have changed each year. Suspicious events made up the greatest share of incident types in 2021, although they have been decreasing from a high in 2016. ("Suspicious event" is a good example of an incident type that is often changed once more information is gathered about the incident.) Agency assists, when BPD officers help another government agency (e.g., another police department or the Department of Children and Families), have decreased over the past three years, but remain in the top five. Mental health issues and welfare checks have been increasing slowly since 2012. "Public assist" is something of a catch-all term, and can include finger-printing, civil issues, removing used syringes, and other activities.
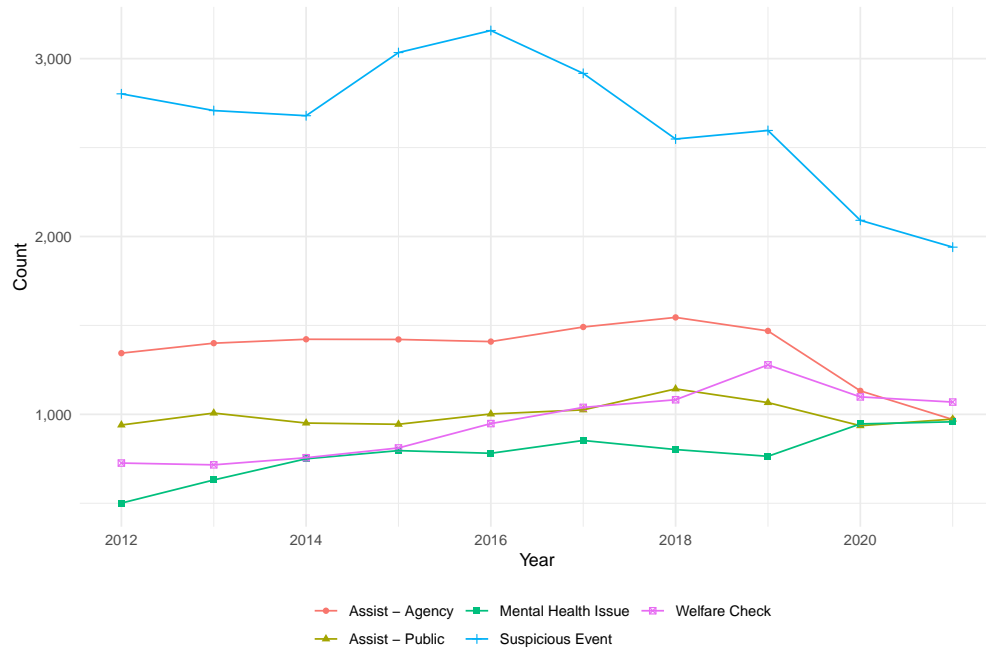
Figure 3: **Incidents that had the highest counts in 2021.**

Figures 4 and 5 show how certain incident types changed before and during the COVID-19 pandemic. The "Pre" period in these graphs is the two-year period prior to the day the state of emergency was declared (March 13, 2018, through March 12, 2020). The "Post" period in these graphs is the two-year period starting on the day the state of emergency was declared (March 13, 2020, through March 12, 2022). This is the only part of the report that includes information from 2022. The reason for including it is that police activity is seasonal, so in order to compare apples to apples, it's best to use counts from complete years.
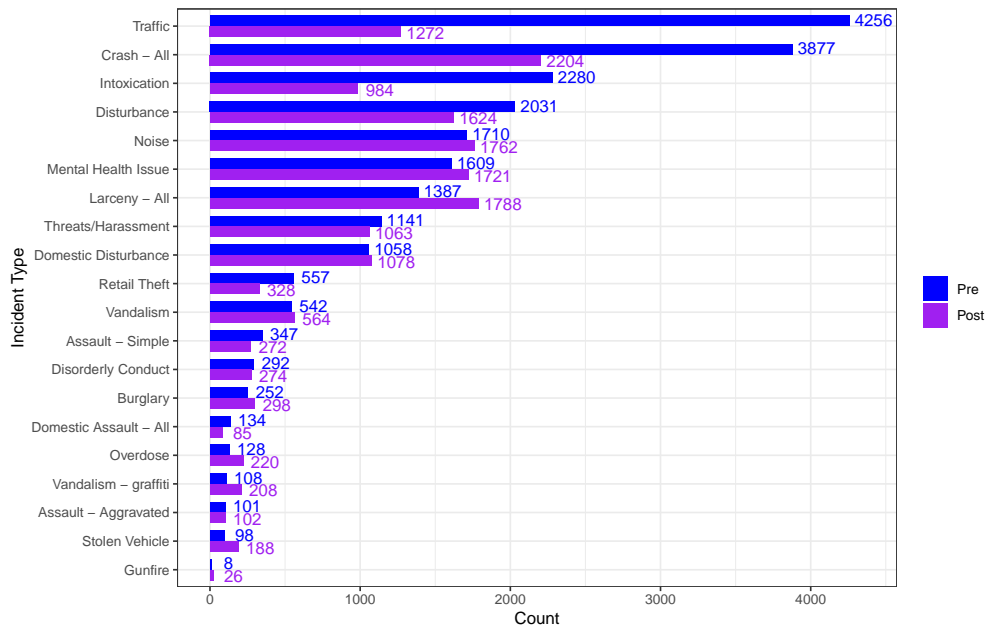
Figure 4: **Counts of certain incident types, before and after the state of emergency was declared.** Pre = March 13, 2018, through March 12, 2020; Post = March 13, 2020, through March 12, 2022. Gunfire is not an incident type, and is tracked separately from Valcour.
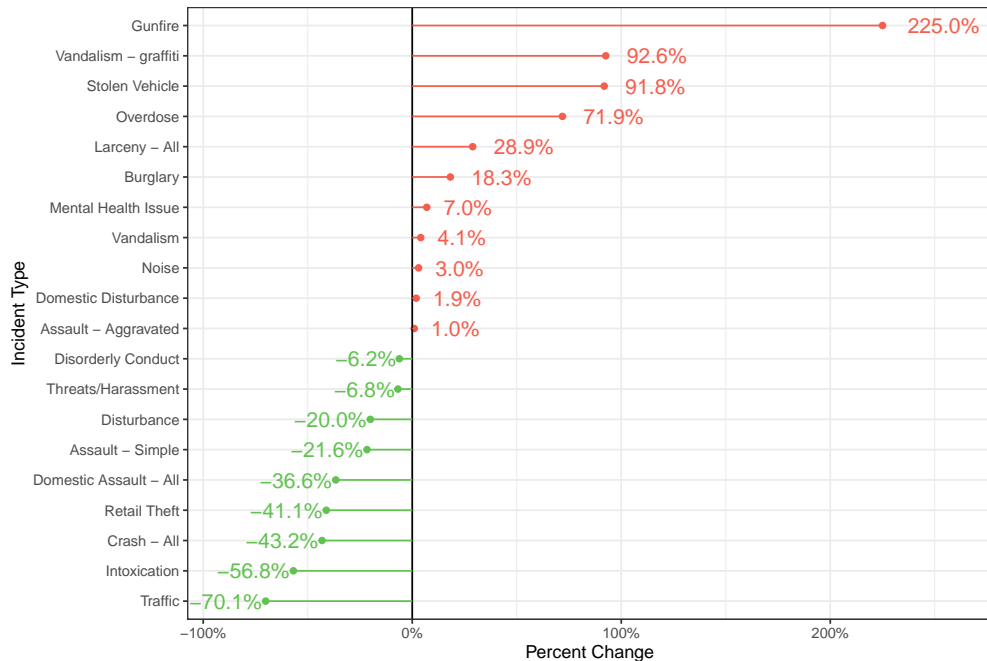
Figure 5: **Percent change in certain incident types, before and after the state of emergency was declared.** Pre = March 13, 2018, through March 12, 2020; Post = March 13, 2020, through March 12, 2022. Gunfire is not an incident type, and is tracked separately from Valcour.

Figure 6 shows how incidents related to domestic violence have changed over time. Domestic disturbances decreased from 2012 to 2018 (except for a small increase in 2014), but have been increasing since. The increase from 2020 to 2021 was not as great as the increases from 2018 to 2019 or 2019 to 2020. Domestic assaults (incidents, not offenses) reached a peak in 2016 and have been decreasing since, except for a small jump in 2019.
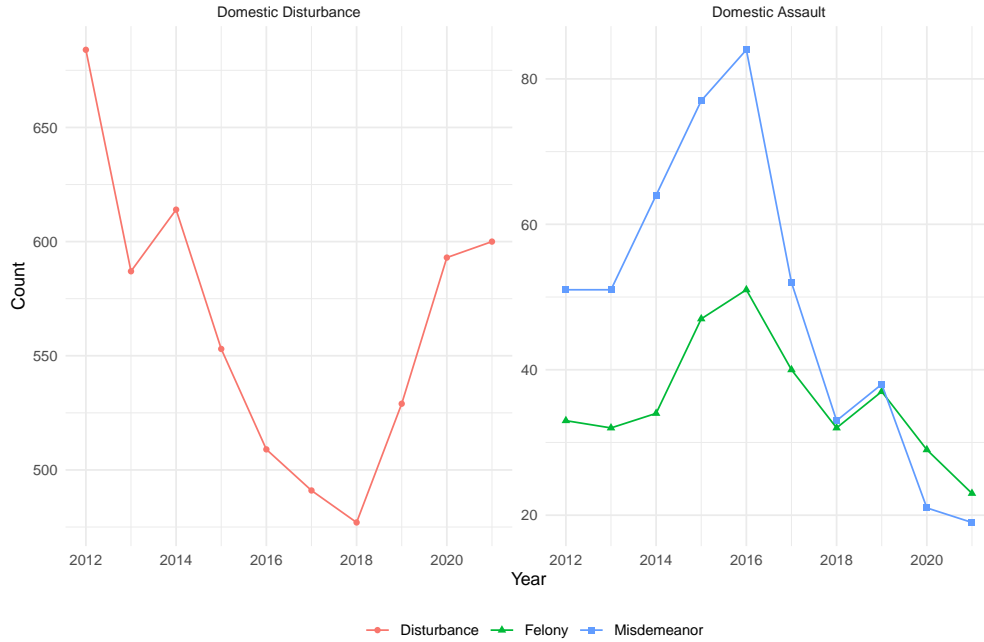
Figure 6: **Domestic disturbances and assaults over time.** These are counts of incidents, not offenses.

3.2 Offenses

Whereas an incident is a unit of police activity, an offense is a crime. Not every incident has an offense, but every offense is associated with an incident. Figure 7 shows that the number of offenses has decreased since 2012, but remained relatively constant since 2018. The same figure shows that violent crime has also decreased since 2012.
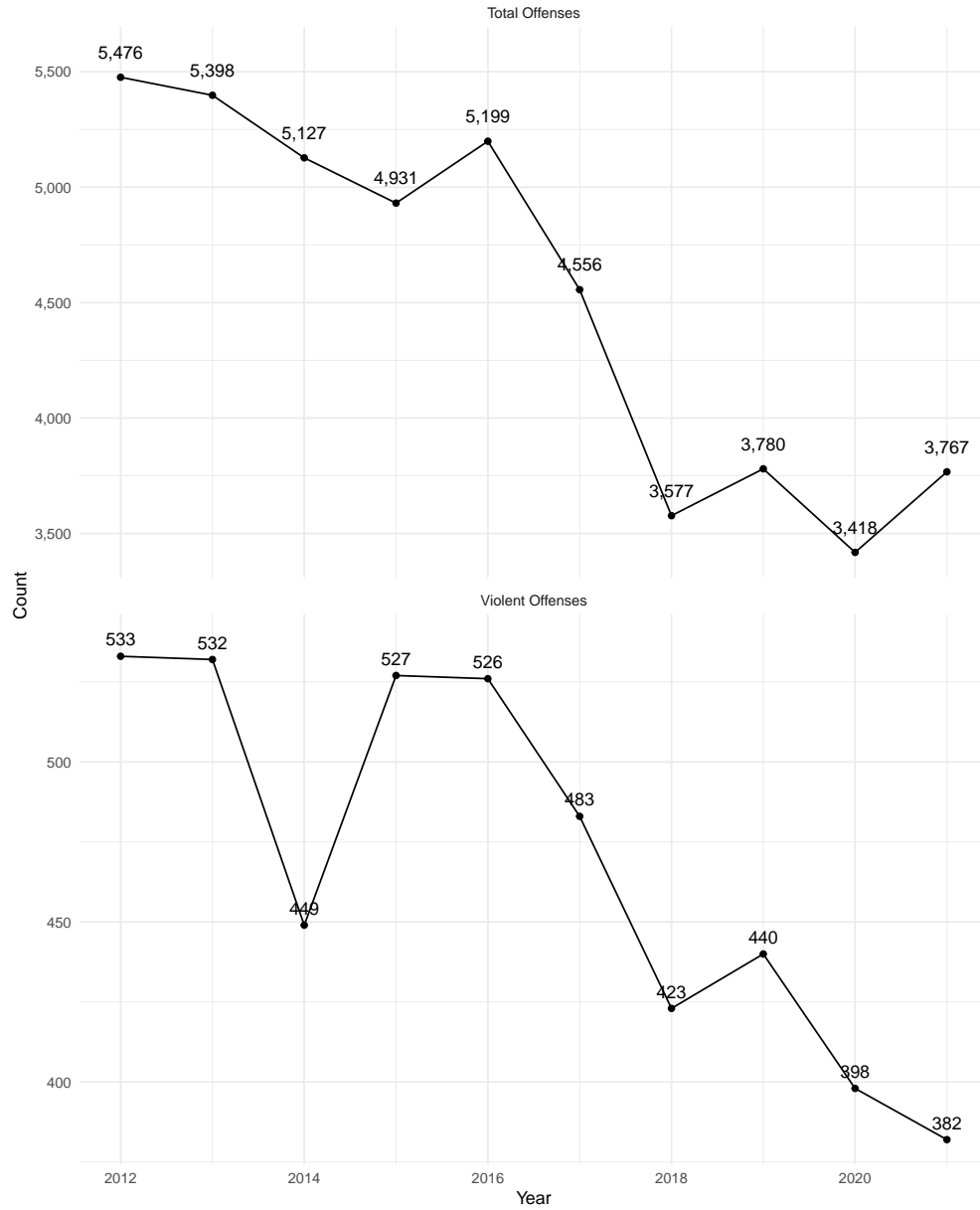
Figure 7: **Number of offenses per year.**

Figure 8 shows the five offenses that had the highest counts in 2021, and how counts of those offenses have changed each year. The offense with the most dramatic increase over the past few years is petit larceny from a motor vehicle, which has more than tripled since 2018. Grand larceny has more than doubled since 2018.
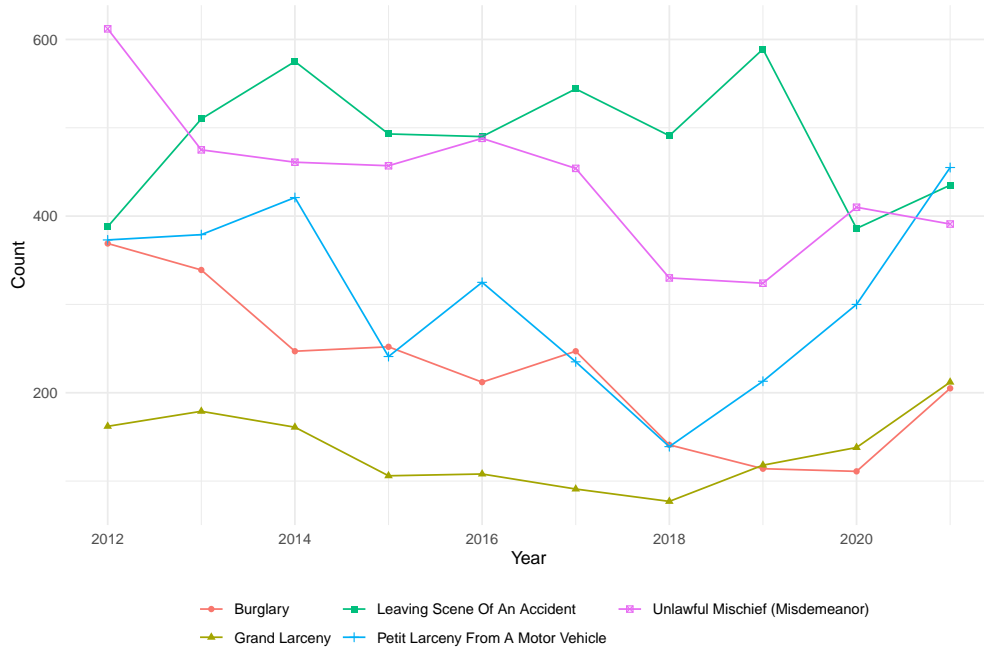
Figure 8: **Offenses that had the highest counts in 2021.**

Figure 9 shows the percentage of offenses that resulted in arrest in 2021, for offenses that occurred at least fifty times. "Arrest" here includes warrant requests. (A warrant is requested if an officer would like to arrest someone but cannot locate them.) Figure 10 shows how the percent of offenses that result in arrest has changed over time, for the most common offenses in 2021.
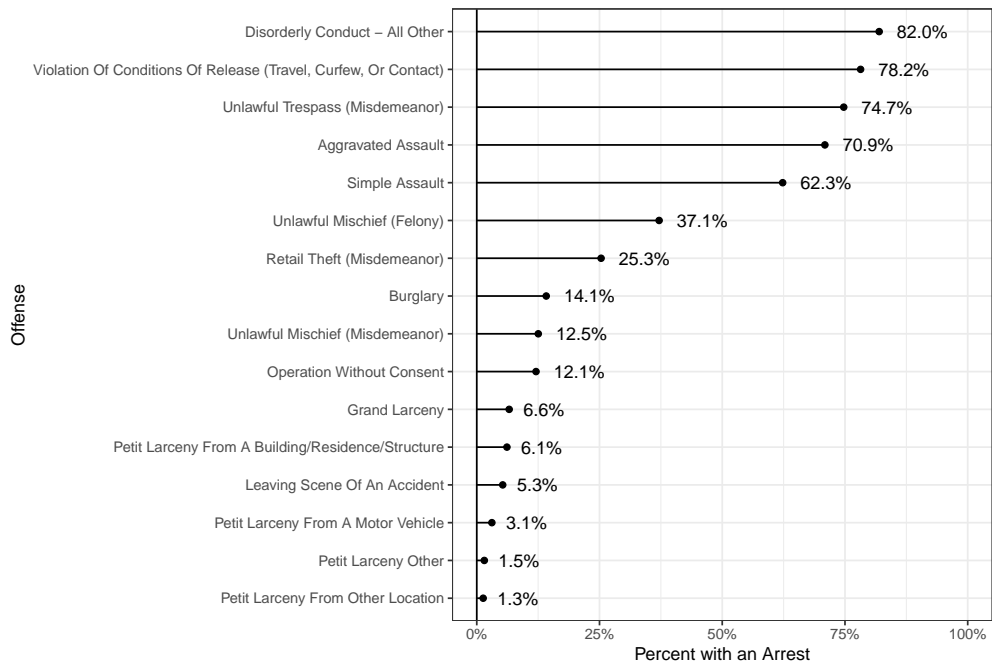
Figure 9: **Percent of offenses that result in arrest.** For offenses occurring at least fifty times in 2021.
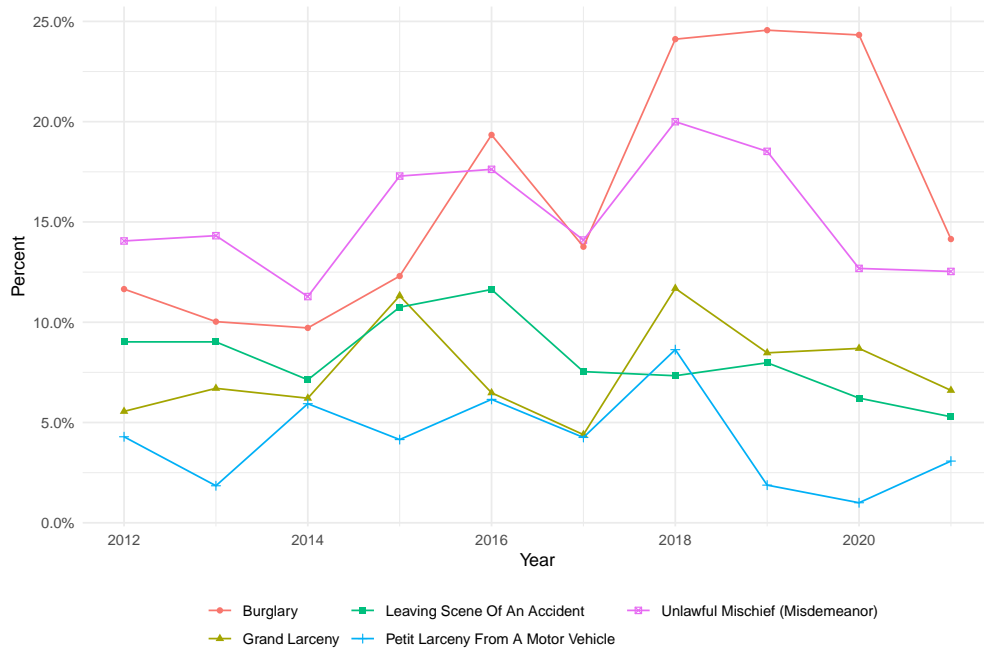
Figure 10: **Percent of offenses that result in arrest, over time.** For the same offenses as in Figure 8.

4   Pedestrian Stops

The 2020 Annual Report did not include information on pedestrian stops because, in 2020, there was no way to track them in Valcour. There is now a flag that can be added to an incident to indicate that it is a pedestrian stop, but there appears to be confusion about what "pedestrian stop" actually means. According to the Motion, "Pedestrian stops refer to officer-initiated stops of pedestrians (or people on a bicycle)." In 2021, five incidents were flagged as pedestrian stops, but only one was "officer-initiated"; the rest were the result of calls to the BPD about witnessed crimes. In the officer-initiated stop, the officer witnessed one man swing his backpack at another, knock his hat off, and try to punch him. So, the officer intervened and handcuffed the aggressor. This incident occurred downtown, in the morning, and the person stopped was a White male. The man was not searched, and in the end he was issued a ticket for disorderly conduct.

5   Traffic Stops

5.1   Data Quality

Each person in Valcour has certain information, including race, that gets displayed any time they are added to an incident. This race field can be changed, and if it is changed, the new value is visible in every incident associated with that person. This is the race field that is used for most sections of this report, but traffic stops are different. Each time an officer pulls over a driver, that officer is supposed to fill out the race they perceive the driver to be. This field is specific to the stop. It can be changed, but if it is changed, the new value is only visible in that specific incident. If the same driver is pulled over later by a different officer, that second officer will fill out the perceived race for that stop. The two officers may have different perceptions about the race of the same driver.

The options for perceived race are as follows:

1. White;

2. Black;

3. Asian or Pacific Islander;

4. Hispanic; and

5. Native American or Alaska Native.

Note that they differ from the race options used in Section 2, and that Hispanic is one option here, whereas elsewhere in Valcour, Hispanic is an ethnicity, not a race. Prior reports, including the 2020 Annual Report, used the overall race field (the one that is the same across all incidents) to fill in missing perceived race. Since the categories don't match, this year's report only uses the perceived race field. Prior to 2017, more than 70% of stops are missing this perceived race field. Thus, year-to-year traffic trends in this report are only for 2017 through 2021. Missing rates for 2017 through 2021 are, respectively, 14.9%, 11.2%, 9.6%, 4.6%, and 4.3%.

Although the Motion requests that Census data be used as a benchmark for identifying disparities in traffic stops, there are multiple reasons why this is not appropriate:

1. For the Census, respondents report their own race, whereas for traffic stops, officers report the perceived race of the operator.

2. The Census has information on age and race for residents of Burlington and Chittenden County, but not for people who drive in Burlington. So, it is possible to report the percentage of Burlingtonians age 15 and older who identify as each race, but it is unclear if driving rates differ across race and age. Further, people driving in Burlington may come from anywhere, not just Burlington itself.

3. The categories for perceived race and in the Census do not match. For perceived race, the options are as stated above and are mutually exclusive. For the Census, the options are as in Table 1 and are also mutually exclusive. (Section 2 does break down the "Two or more races" category in a way that

allows for overlap, so the categories are not mutually exclusive. This does not appear to be possible when looking at race and age at the same time in the Census.) In order to match the categories for traffic stops to categories in the Census, operators perceived to be Hispanic and Census respondents identifying as more than one race would have to be removed from analysis.

For these reasons, Census data are not used as a benchmark for this section. Instead, race data for operators in crashes are used. For each motor vehicle accident that occurs in Burlington, BPD is required to report certain information to the state, including the perceived races of the operators. Since these data are for people who are known to operate motor vehicles in Burlington; they represent race as perceived by officers, and the categories match the categories used in traffic stops; they are a better benchmark for determining disparities.

Of course, the crash data are not perfect. Officers are required to report the perceived race of the operator, but only if they see the operator. Sometimes, officers never interact with one or more operators in a crash (for example, if a driver leaves the scene of an accident before police arrive). So, each year, about 10% of the operators are missing race. Table 4 shows the percentage of drivers in motor vehicle accidents in Burlington in 2021 who were perceived to be of each race.

Race	N	%
Total (including missing values)	1,513	N/A
Total (excluding missing values)	1,347	100.0%
White	1,093	81.1%
Black	143	10.6%
Asian or Pacific Islander	87	6.5%
Hispanic	15	1.1%
Native American or Alaskan Native	9	0.7%
Unknown	166	N/A

Table 4: **Perceived race of drivers in motor vehicle crashes in Burlington in 2021.**

There is no single drop-down menu or checkbox that designates an incident as a traffic stop. The 2020 Annual Report relied on an algorithm to identify traffic stops, using such fields as the call type, ticket violations, and the "Accident" checkbox, among others. That algorithm has been refined this year, but it is still overly sensitive, meaning it identifies incidents that aren't traffic stops as traffic stops. However, since it is entirely automated, and since the overall volume of incidents is so high each year, this algorithm is used in this report when reporting on year-to-year trends. When reporting on traffic stops in 2021 alone, this report uses data that were audited by a human being. This auditing process is described in the Appendix. The auditing process is more accurate because it can leverage both the information from the algorithm and narratives that can be read by a human auditor. Table 5 shows the accuracy of the algorithm. Approximately 3% of the traffic stops identified by the algorithm in 2021 were not actually stops.

	Algorithm Positive	Algorithm Negative	Total
Audit Positive	680	0	680
Audit Negative	21	20,862	20,883
Total	701	20,862	21,563

Table 5: **Confusion matrix for incidents in 2021.** Audit = the auditing procedure; Algorithm = the algorithm used for reporting year-to-year trends; Positive = identified as a traffic stop; Negative = not identified as a traffic stop.

5.2 Requested Information

Figure 11 shows that the number of officer-generated traffic stops has decreased approximately 88.9% since 2015, from 6,262 to 694. Table 6 shows the total number of traffic stops in 2021, both overall and by race. None of the operators stopped in 2021 were perceived to be Native American or Alaska Native. Very few stops were externally-generated, or non-discretionary. Table 6 also shows the median duration of stops by race. There is not much difference in the median duration of traffic stops for White, Black, and Asian drivers; among these three groups, White drivers have the lowest median duration and Black drivers have the highest. Given that only two of the motorists stopped in 2021 were perceived to be Hispanic, it's unwise to read too much into the long median duration of stops. This could be the result of chance. Finally, Table 6 shows the number of stopped vehicles with Vermont versus out-of-state plates. The majority of traffic stops are of Vermont vehicles.
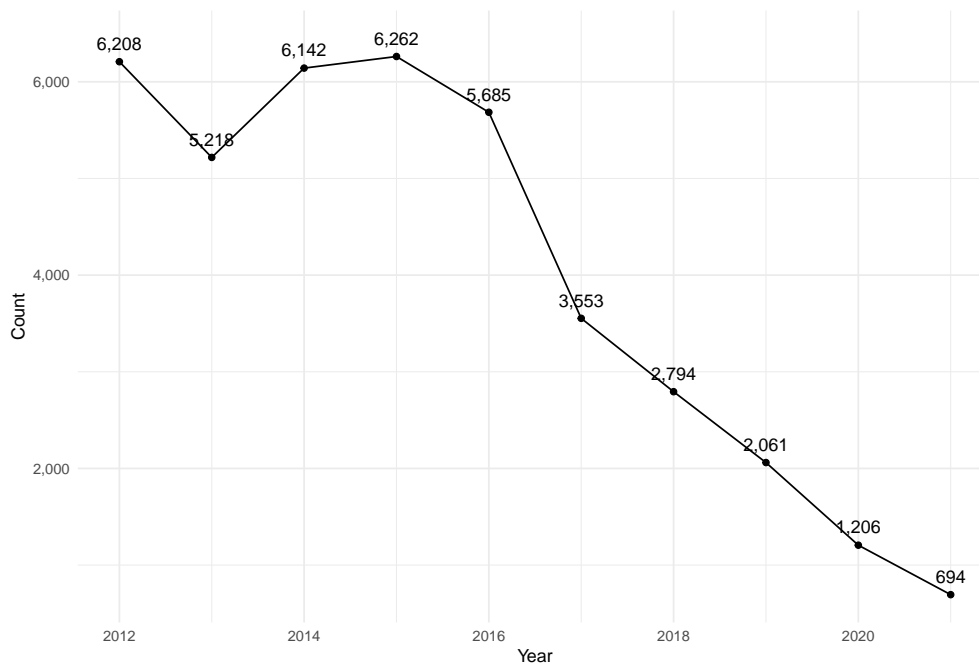
Figure 11: **Number of traffic stops over time.** This figure excludes externally-generated stops.

	Total	White	Black	Asian	Hispanic	Unknown
Including externally generated stops	680	586	49	33	2	10
Excluding externally generated stops	673	583	47	32	2	9
Median duration of stop (min:sec)	7:05	7:00	7:15	7:13	14:32	11:40
Vermont vehicle	517	455	34	25	2	1
Out-of-state vehicle	129	113	10	6	0	0
Missing vehicle state	34	18	5	2	0	9

Table 6: **Total traffic stops in 2021.**

Table 7 compares the proportion of stops where the driver was perceived to be of a given race to the proportion of crashes where the driver was perceived to be of that race. In 2021, White people were slightly over-represented among stopped drivers, whereas Black, Asian, and Hispanic drivers were under-represented. As shown in Figure 12, this is the first year when Black people are under-represented among stopped drivers.

	White	Black	Asian	Hispanic
Including externally generated stops	0.875	0.073	0.049	0.003
Excluding externally generated stops	0.878	0.071	0.048	0.003
Driver Percentage (VTrans Accident data)	0.811	0.106	0.065	0.011
Disparity Index (Including externally generated stops)	1.078	0.689	0.763	0.268
Disparity Index (Excluding externally generated stops)	1.082	0.667	0.746	0.270

Table 7: **Racial shares of traffic stops in 2021.** The disparity index is equal to the share of stops divided by the share of drivers
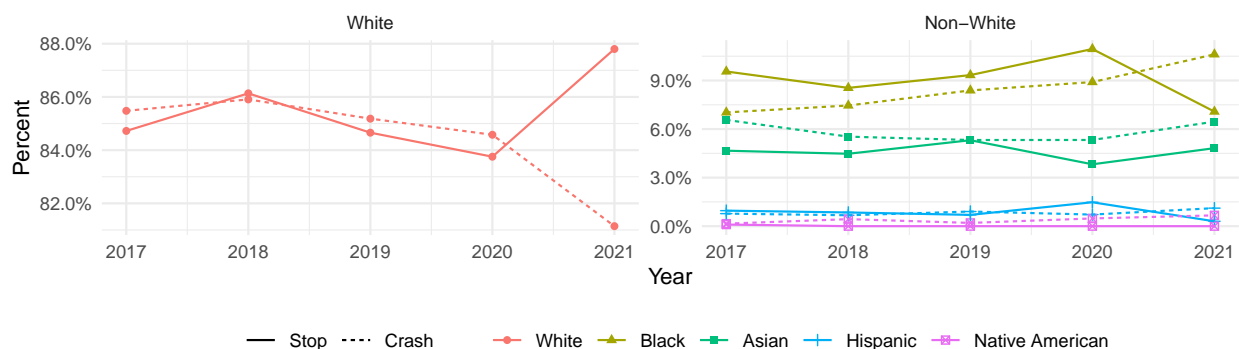
Figure 12: **Percentage of stops or crashes where the operator is a given race.** This figure excludes externally-generated stops. Note that the vertical or y-axes have different scales.

Table 8 shows the reasons for traffic stops in 2021. Most stops are made because of moving violations, which include things like running a stop sign, speeding, or driving over the yellow line. The next-most-common cause of a traffic stop is vehicle equipment, like having a light out. Table 9 shows the outcomes of traffic stops in 2021. (Note that this table excludes externally-generated stops.) Across race, most traffic stops result in a warning. A chi-square test of independence finds no statistically significant difference in outcomes between stops of White and Black motorists.

	White		Black		Asian		Hispanic		Unknown	
Reason	N	%	N	%	N	%	N	%	N	%
Total	586	100.0%	49	100.0%	33	100.0%	2	100.0%	10	100.0%
Moving violation	493	84.1%	38	77.6%	26	78.8%	2	100.0%	8	80.0%
Investigatory	5	0.9%	1	2.0%	0	0.0%	0	0.0%	0	0.0%
Vehicle Equipment	77	13.1%	7	14.3%	6	18.2%	0	0.0%	0	0.0%
Externally Generated	3	0.5%	2	4.1%	1	3.0%	0	0.0%	1	10.0%
Other	8	1.4%	1	2.0%	0	0.0%	0	0.0%	0	0.0%
Unknown Stop Reason	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	10.0%

Table 8: **Reasons for traffic stops in 2021.** There were no stops made due to suspicion of DUI.

	White		Black		Asian		Hispanic		Unknown	
Outcome	N	%	N	%	N	%	N	%	N	%
Total	583	100.0%	47	100.0%	32	100.0%	2	100.0%	9	100.0%
Ticket	121	20.8%	8	17.0%	3	9.4%	1	50.0%	0	0.0%
Warning	447	76.7%	34	72.3%	27	84.4%	1	50.0%	3	33.3%
No action taken	6	1.0%	2	4.3%	0	0.0%	0	0.0%	1	11.1%
Arrest for Violation	9	1.5%	3	6.4%	2	6.2%	0	0.0%	5	55.6%

Table 9: **Outcomes of traffic stops in 2021.** There were no arrests made on warrant. This table excludes externally-generated stops

In 2021, there were seven searches at traffic stops. Table 10 contains information on each search. Searches and stops have been decreasing over the past five years, as Figure 13 shows. In 2019, no Black drivers were searched at internally-generated stops, and in 2021, no White drivers were. (Table 10 does contain the search of a White driver, but that stop was externally-generated.) These low numbers make it difficult to compare hit rates (the proportion of searches that turn up contraband) in a meaningful way. If only one person is searched, the only possible values for the hit rate are 0% or 100%.

	Stop 1	Stop 2	Stop 3	Stop 4	Stop 5	Stop 6	Stop 7
Reason for Stop	MV	MV	EG	EG	MV	MV	MV
Race	Unknown	Asian	Asian	White	Unknown	Black	Black
Type	PC	RS	RS	PC	RS	PC	PC
Contraband	None	None	None	Firearm	None	None	None
Outcome	Arrest	Arrest	Arrest	Warning	Arrest	No action	Arrest

Table 10: **Searches at traffic stops in 2021.** MV = moving violation; EG = externally-generated; PC = consent search with probable cause; RS = reasonable suspicion.

The rest of the requested information can be found in the Appendix.

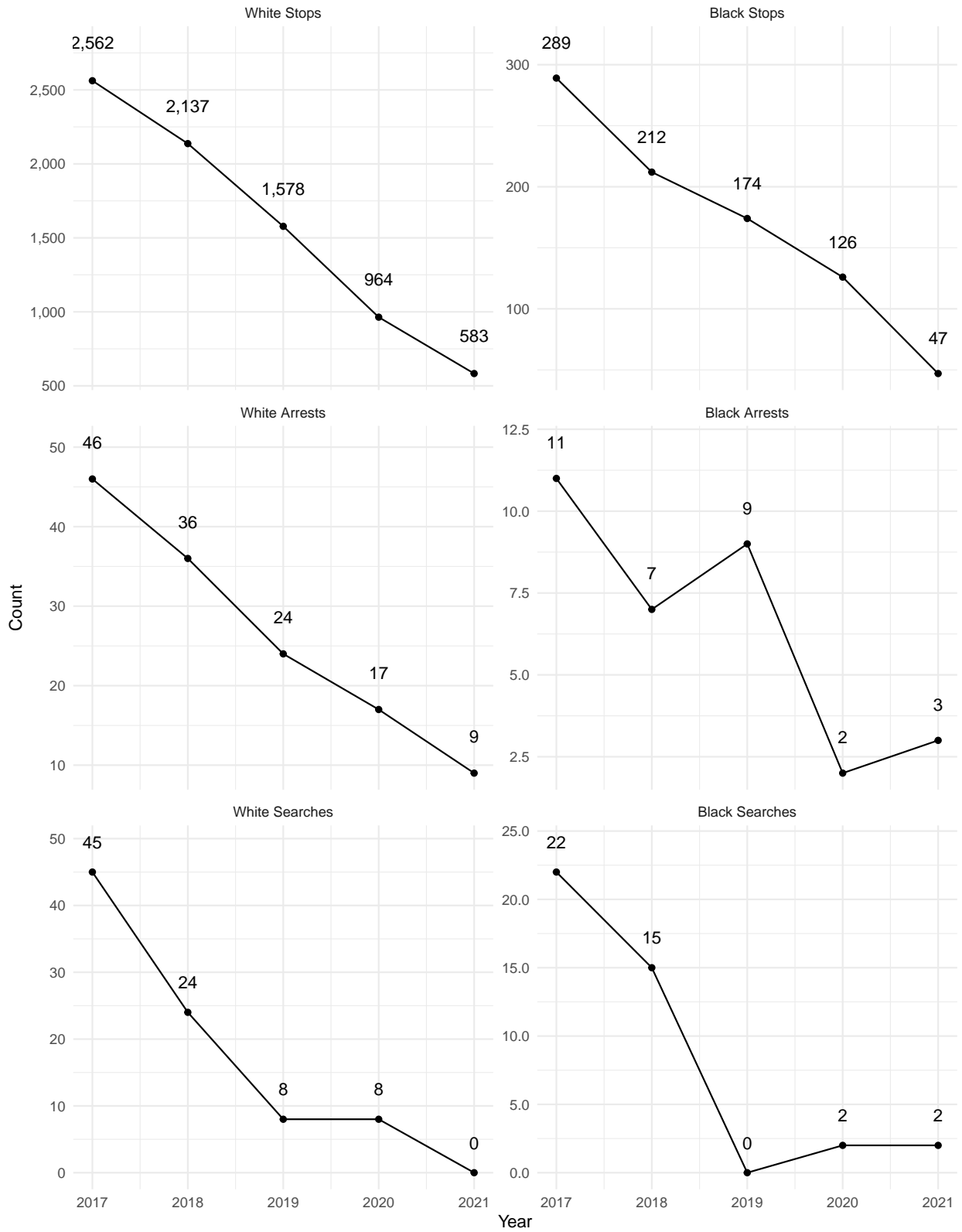Figure 13: **Counts of traffic stops, arrests at traffic stops, and searches at traffic stops, by race.** This figure excludes externally-generated stops. Note that the vertical or y-axes have different scales.

6 Arrests

6.1 Data Quality

The counts in this section differ in one important way from the counts presented in the 2020 Annual Report. The 2020 Annual Report counted some arrests multiple times as a result of the way the National Incident-Based Reporting System (NIBRS) requires crimes to be reported to the FBI. Specifically, NIBRS requires crimes that are separated by space or time to be reported as separate incidents, even if they are committed by the same person. So, for example, if someone smashes several car windows in the Old North End, walks downtown, and smashes several windows there, this must to be recorded as two separate incidents. This is because the crimes are separated by space, even if they occurred in a relatively short time window. If this person is arrested, they will be recorded as arrested in both Valcour incidents, even though there is really only one arrest. In last year's report, this type of arrest was counted once for each separate incident; in this year's report, this type of arrest is only counted once overall. (In this section. For Figures 9 and 10, all arrests are used.) For each year from 2012 through 2021, the number of arrests that were removed because they were duplicates is 105, 55, 68, 60, 56, 49, 36, 24, 22, and 24.

As in last year's report, this year's report only includes information on the most serious charge in an arrest. This introduces problems for three reasons:

1. Officers are not required to select any charge as the most serious, leaving some arrests without a most serious charge.

2. Officers may select more than one charge as the most serious, leaving some arrests with more than one most serious charge.

3. There is no standard hierarchy of charges, so each officer is free to rank the charges in whatever way they see fit.

In preparing this report, arrests with zero or more than one most serious charge were modified so that each had exactly one most serious charge. The following ranking, from most to least serious, was used:

1. Violent felony.

2. Non-violent felony.

3. Violent misdemeanor.

4. Non-violent misdemeanor.

If for some reason an arrest had more than one charge within one of these categories that was marked as the most serious (e.g., two violent felonies), one of those charges was selected at random to be the most serious. The Appendix contains more information on data quality.

6.2 Requested Information

Figure 14 shows how the total number of arrests has changed over time. Overall, the number of arrests has been decreasing since 2016. Figure 14 also shows that the number of arrests where race is missing is decreasing; this is likely due to expungement. As time goes by, more charges will be expunged, but none will become un-expunged. Similar plots for racial groups with very small numbers of arrests each year are in the Appendix.

Figure 14: **Change over time in the number of arrests.** Note that the vertical or y-axis is different for each plot.

Table 11 shows the share of arrests for each race category in 2021, both including and excluding arrests on warrant. Comparing Table 11 to Table 1, Black people are vastly over-represented in arrests relative to their share of the population of Burlington; as shown in Figure 15, this is consistent with previous years.

| | Including AOW | | Excluding AOW | |
Race	N	%	N	%
Total (including missing values)	987	N/A	840	N/A
Total (excluding missing values)	971	100.0%	825	100.0%
White	736	75.8%	618	74.9%
Black or African American	199	20.5%	176	21.3%
American Indian and Alaska Native	1	0.1%	1	0.1%
Asian	32	3.3%	27	3.3%
Some other race	3	0.3%	3	0.4%
Missing race	16	N/A	15	N/A

Table 11: **Race of arrestees in 2021.** AOW = arrests on warrant. There were no arrests of Native Hawaiians or other Pacific Islanders.
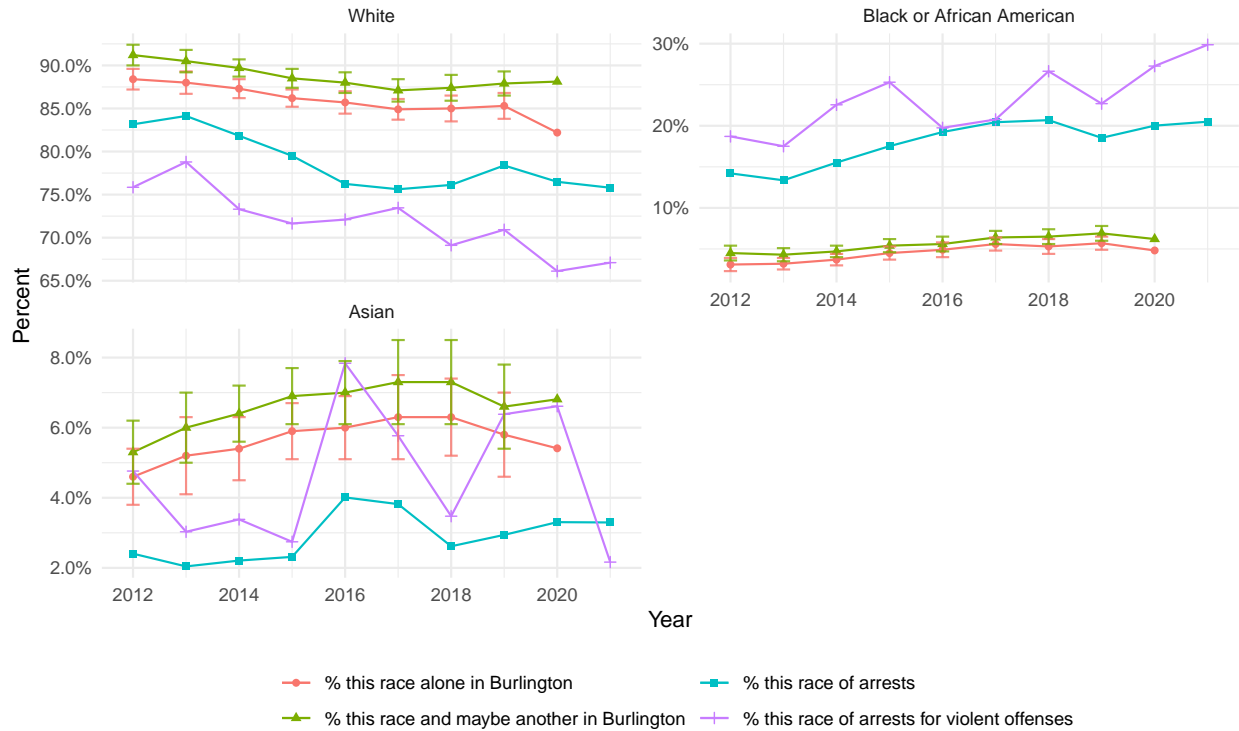

Figure 15: **Change over time in the racial composition of arrests.** Note that the vertical or y-axis is different for each plot.

Table 12 shows type of arrest by race. Black arrestees are more likely to be lodged than White arrestees. This may be because, as shown in Table 13, Black arrestees are more likely to be charged with a violent crime than White arrestees. (As noted in Section 1, in reviewing this report, BPD leadership emphasized that no arrestee may be lodged without judicial review and approval.) Figure 16 shows how the number of arrests of each severity level has changed over time. The following are examples of charges falling into each severity level:

1. Violent felony: Aggravated assault, assault and robbery, aggravated domestic assault, murder, sexual assault.

2. Non-violent felony: Burglary, cocaine sale, fentanyl sale, heroin sale, grand larceny, identity theft, felony retail theft impeding public officers, lewd and lascivious conduct.

3. Violent misdemeanor: Criminal threatening, domestic assault, simple assault, stalking.

4. Non-violent misdemeanor: Disorderly conduct, driving under the influence, driving with a criminally suspended license, leaving the scene of an accident, petit larceny, operation without consent, misdemeanor retail theft.

	Total		Cited		Lodged		Warrant		Request		CJC	
Race	N	%	N	%	N	%	N	%	N	%	N	%
White	736	100.0%	384	52.2%	95	12.9%	118	16.0%	54	7.3%	85	11.5%
Black	199	100.0%	95	47.7%	49	24.6%	23	11.6%	20	10.1%	12	6.0%
American Indian	1	100.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Asian	32	100.0%	17	53.1%	7	21.9%	5	15.6%	0	0.0%	3	9.4%
Some other race	3	100.0%	2	66.7%	1	33.3%	0	0.0%	0	0.0%	0	0.0%
Missing race	16	100.0%	11	68.8%	0	0.0%	1	6.2%	3	18.8%	1	6.2%

Table 12: **Type of arrest by race in 2021.** No Pacific Islanders were arrested in 2021. Warrant = Arrested on Warrant, Request = Warrant Request, and CJC = Referred to the Community Justice Center.

	Total		VF		NVF		VM		NVM		U	
Race	N	%	N	%	N	%	N	%	N	%	N	%
White	736	100.0%	63	8.6%	127	17.3%	92	12.5%	298	40.5%	156	21.2%
Black	199	100.0%	37	18.6%	37	18.6%	32	16.1%	64	32.2%	29	14.6%
Native American	1	100.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%
Asian	32	100.0%	2	6.2%	1	3.1%	3	9.4%	19	59.4%	7	21.9%
Some other race	3	100.0%	1	33.3%	0	0.0%	1	33.3%	1	33.3%	0	0.0%
Missing race	16	100.0%	1	6.2%	5	31.2%	4	25.0%	2	12.5%	4	25.0%

Table 13: **Severity of arrests in 2021.** Some charges are misdemeanors or felonies depending on the specifics of the case; these uncategorized arrests are listed under "U". VF = Violent Felony, NVF = Non-Violent Felony, VM = Violent Misdemeanor, NVM = Non-Violent Misdemeanor, U = Uncategorized. No Pacific Islanders were arrested in 2021.

Figure 16: **Number of arrests each year, by severity.** Note that the vertical or y-axis is different for each plot. Some charges are misdemeanors or felonies depending on the specifics of the case, and are not represented in this plot.

Table 14 shows the percentage of arrests in 2021 where force was used, by race and arrest severity. Black arrestees for violent crimes are about equally likely as White arrestees for violent crimes to be subjects of force. For non-violent crimes, Black arrestees are more likely to be subjects of force. As shown in Figures 17 and 18, this pattern is consistent across years. The difference between Figures 17 and 18 is that Figure 17 counts displaying or pointing a gun as a use of force, whereas Figure 18 does not. This distinction is explained further in Section 7.

In Figure 18, among non-violent misdemeanors, the rate of use of force increases from 2020 to 2021, but the difference is not statistically significant. Across 2020 and 2021, the difference between White and Black arrestees is statistically significant. The increase in the disparity is not statistically significant. So, although the gap between Black and White in 2021 is greater than the gap between Black and White in 2020, the increase is no bigger than would be expected by chance alone. All of these statements are true whether or not you treat pointing or displaying a gun as a use of force.

The rest of the requested information can be found in the Appendix.

| | White | | | | | | Black | | | | | |
| | Total | | UOF | | NPD | | Total | | UOF | | NPD | |
Severity	N	%	N	%	N	%	N	%	N	%	N	%
VF	63	100.0%	14	22.2%	12	19.0%	37	100.0%	8	21.6%	7	18.9%
NVF	127	100.0%	14	11.0%	10	7.9%	37	100.0%	10	27.0%	7	18.9%
VM	92	100.0%	9	9.8%	8	8.7%	32	100.0%	3	9.4%	3	9.4%
NVM	298	100.0%	13	4.4%	10	3.4%	64	100.0%	10	15.6%	7	10.9%

Table 14: **Percent of arrests in 2021 that also have a use of force, by race and severity.** VF = Violent Felony, NVF = Non-Violent Felony, VM = Violent Misdemeanor, NVM = Non-Violent Misdemeanor; UOF = Force used; NPD = Force used, not counting pointing or displaying a gun as a use of force.
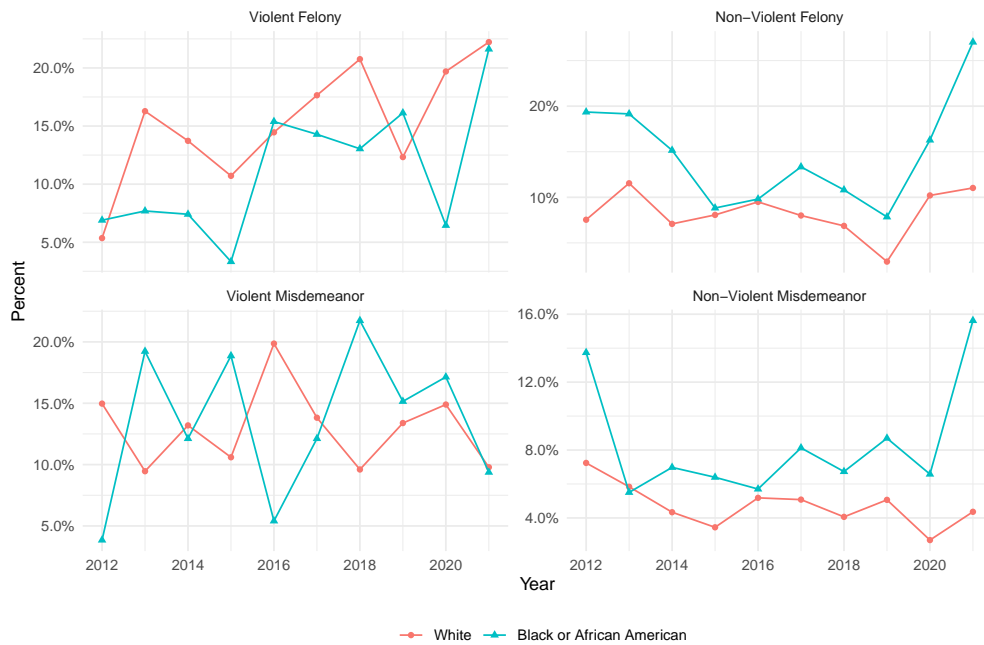

Figure 17: **Percent of arrests that also have a use of force, by race, year, and severity.** Note that the vertical or y-axis is different for each plot.
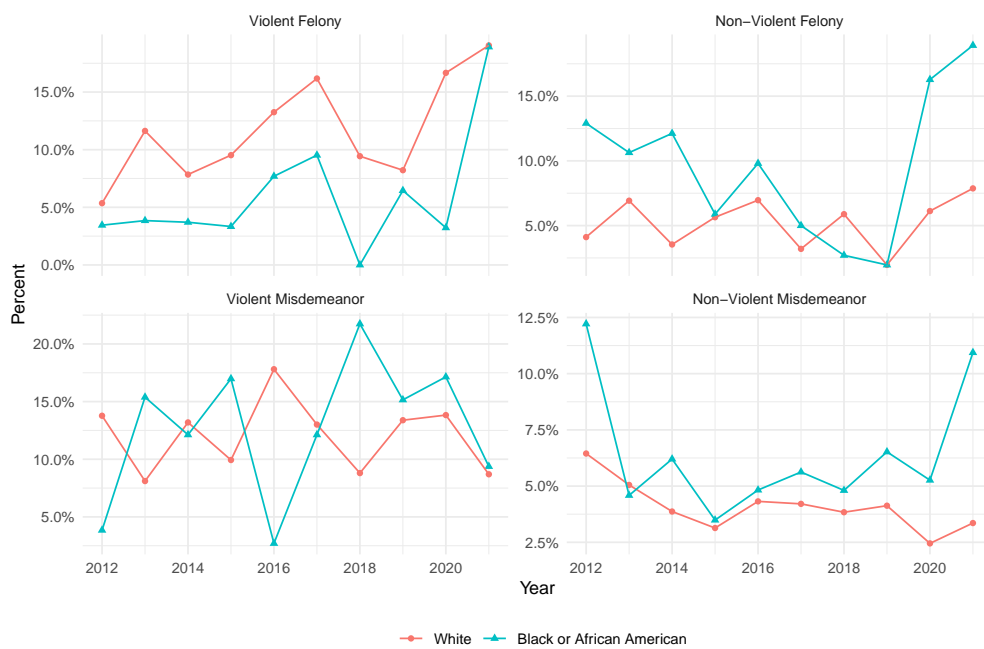
Figure 18: **Percent of arrests that also have a use of force, by race, year, and severity, not considering drawing or pointing a firearm to be a use of force.** Note that the vertical or y-axis is different for each plot.

7   Uses of Force

7.1   Data Quality

There are multiple ways to count uses of force. Each police incident may have multiple officers using multiple types of force against multiple subjects. Unless otherwise specified, this section counts person-incidents, which are unique combinations of incident number/first name/last name/date of birth. Thus, if officers use force against two subjects in the same incident, that yields two person-incidents. If two officers use force against the same subject in the same incident, that yields one person-incident, but two officer-incidents, where "officer-incident" is a unique officer badge/incident number pair.

One type of force that deserves special mention is the display or pointing of a firearm, because officers sometimes do this before interacting with a non-officer in an incident. For example, officers may draw their firearms before entering a building to carry out a search warrant, or before interacting with an individual who has been reported to be holding a weapon. For this reason, some of the information in this section is presented both treating the display or pointing of a firearm as a use of force and not. Consider two example incidents:

1. A gun is pointed at an individual.

2. A gun is pointed at an individual, and that individual is also tased.

When the display or pointing of a firearm is treated as a use of force (the default), both of these incidents are counted. When the display or pointing of a firearm is not treated as a use of force, only the second incident is counted.

The Appendix contains additional information on data quality.

7.2   Requested Information

Figures 19 through 21 show how both the number of uses of force and the racial shares of uses of force have changed over time. Overall uses of force have mainly decreased since 2012, with increases from 2015 to 2016 and from 2020 to 2021. In contrast, uses of force against Black and Asian people have remained relatively constant. As shown in Figure 20, White and Asian people make up a smaller percentage of the total number of uses of force than would be expected based on Census data, and Black people make up a larger percentage. There has not been much change over the years in the number of times that officers have drawn or pointed their guns. Similar figures for racial groups with very low numbers of uses of force are in the Appendix.
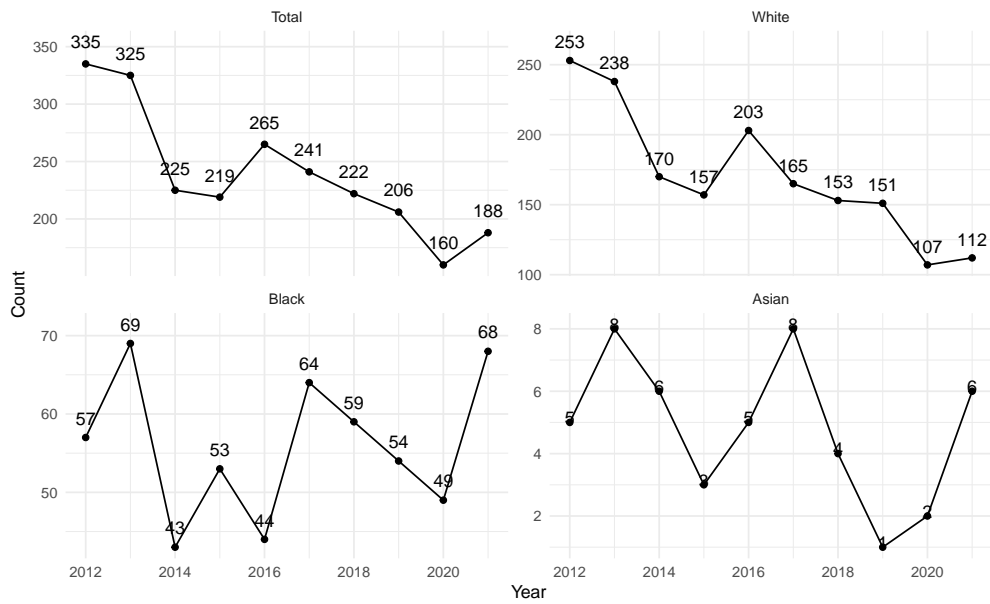
Figure 19: **Change over time in the number of uses of force.** Note that each plot has a different vertical or y-axis.
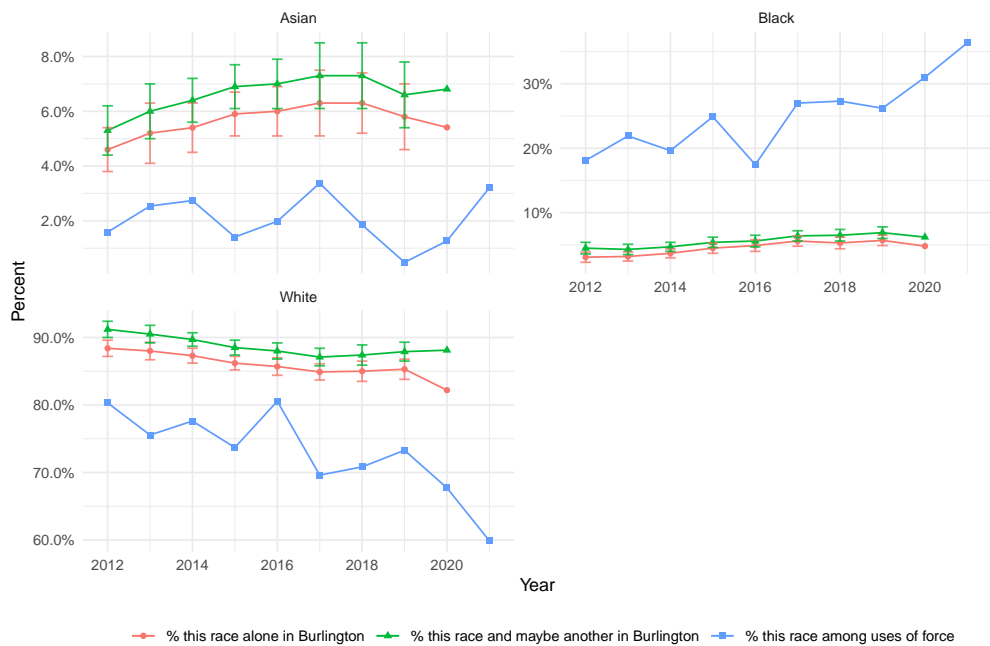

Figure 20: **Change over time in the racial composition of subjects of force.** Note that each plot has a different vertical or y-axis.
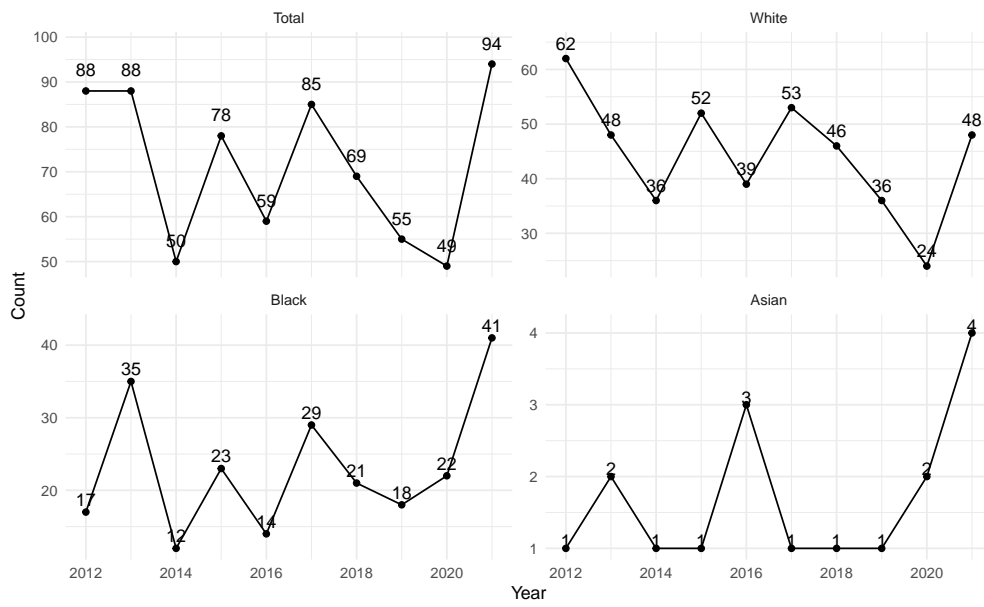
Figure 21: **Change over time in officers drawing or pointing their gun.** Note that each plot has a different vertical or y-axis.

Table 15 shows the types of force used in 2021, by race. "Empty hand controls" are the most common type of force used against White people, but pointing a firearm is the most common type of force used against Black people. Figure 22 shows that, across time, uses of force against Black subjects are more likely than uses of force against White subjects to involve pointing or displaying a gun.

Type	White N	%	Black N	%	Asian N	%	Other N	%	Unknown N	%
Total	112	100.0%	68	100.0%	6	100.0%	1	100.0%	1	100.0%
Empty Hand Controls	58	51.8%	26	38.2%	2	33.3%	0	0.0%	0	0.0%
Firearm Pointed	40	35.7%	35	51.5%	3	50.0%	1	100.0%	0	0.0%
Firearm Displayed	15	13.4%	23	33.8%	2	33.3%	0	0.0%	0	0.0%
Other Force Used	17	15.2%	8	11.8%	3	50.0%	0	0.0%	0	0.0%
Taser Displayed	18	16.1%	8	11.8%	0	0.0%	0	0.0%	0	0.0%
Handcuff Control Techniques	10	8.9%	8	11.8%	0	0.0%	0	0.0%	0	0.0%
Taser Used	5	4.5%	3	4.4%	0	0.0%	0	0.0%	0	0.0%
Pepper Spray Used	4	3.6%	3	4.4%	1	16.7%	0	0.0%	1	100.0%
Projectile Launcher Displayed	1	0.9%	2	2.9%	0	0.0%	0	0.0%	0	0.0%
Projectile Launcher Used	1	0.9%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Pepper Spray Displayed	1	0.9%	1	1.5%	0	0.0%	0	0.0%	0	0.0%
Personal Impact Strike	2	1.8%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Projectile Launcher Pointed	0	0.0%	1	1.5%	0	0.0%	0	0.0%	0	0.0%
Unknown type	2	1.8%	2	2.9%	0	0.0%	0	0.0%	0	0.0%

Table 15: **Type of force used in 2021.** Percentages will not sum to 100% because any person-incident may involve multiple types of force.

Figure 22: **Change over time in the percent of uses of force where a gun is pointed or displayed, by race.**

Table 16 contains the types of resistance to force in 2021, by race. The types of resistance are ordered from most to least severe, with "Deadly Force" being the most and "Compliant" being the least. This ordering was chosen by BPD leadership. For each person-incident, o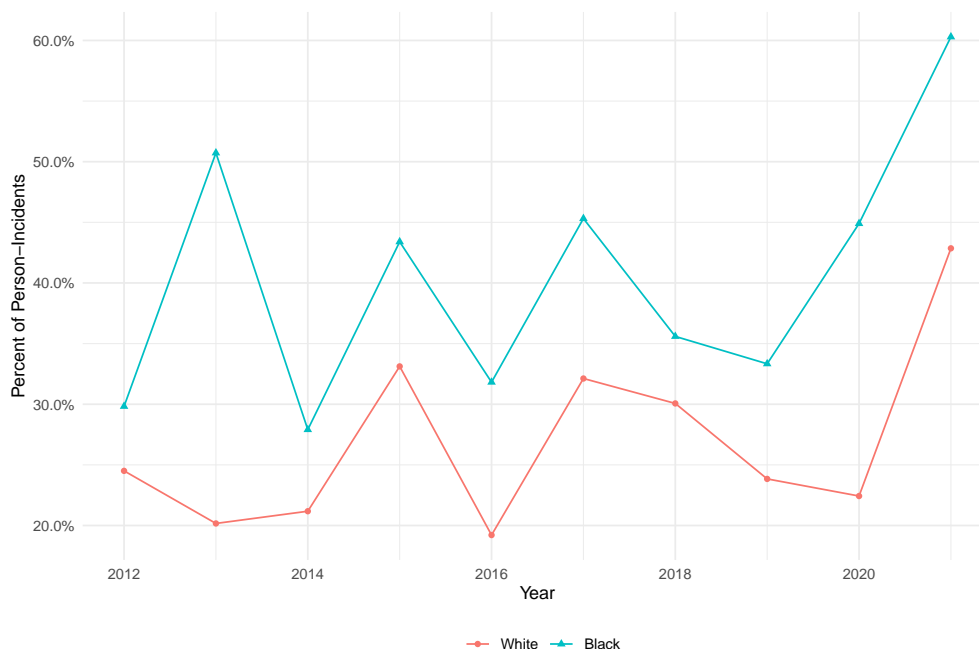nly the most severe type of resistance was used. The inclusion of "compliant" as a type of resistance highlights the fact that these quantitative summaries do not illuminate the order of events in a use of force. It is often the case that police will draw a gun before engaging with an individual, for example, when entering an unsecured building. In these cases, compliance often follows. In other incidents, the force follows the "resistance". Table 17 shows the types of resistance to force in 2021, by race, but without treating displaying or pointing a firearm as a use of force. The percentage of subjects of force who are "compliant" drops in each racial category.

Type	White		Black		Asian		Other		Unknown	
	N	%	N	%	N	%	N	%	N	%
Total	112	100.0%	68	100.0%	6	100.0%	1	100.0%	1	100.0%
Deadly Force	2	1.8%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Assaultive	24	21.4%	16	23.5%	1	16.7%	0	0.0%	1	100.0%
Active Resistance	38	33.9%	17	25.0%	1	16.7%	0	0.0%	0	0.0%
Psychological Intimidation	4	3.6%	3	4.4%	0	0.0%	0	0.0%	0	0.0%
Verbal Non-Compliance	3	2.7%	4	5.9%	1	16.7%	0	0.0%	0	0.0%
Passive Resistance	13	11.6%	6	8.8%	0	0.0%	0	0.0%	0	0.0%
Compliant	24	21.4%	19	27.9%	2	33.3%	1	100.0%	0	0.0%
Unknown	4	3.6%	3	4.4%	1	16.7%	0	0.0%	0	0.0%

Table 16: **Types of resistance to force in 2021.** The resistance types are ordered from most (Deadly Force) to least (Compliant) severe. Each person-incident was categorized by its most severe type of resistance.

Type	White		Black		Asian		Other		Unknown	
	N	%	N	%	N	%	N	%	N	%
Total	78	100.0%	39	100.0%	3	100.0%	0	N/A	1	100.0%
Deadly Force	2	2.6%	0	0.0%	0	0.0%	0	N/A	0	0.0%
Assaultive	24	30.8%	16	41.0%	0	0.0%	0	N/A	1	100.0%
Active Resistance	36	46.2%	14	35.9%	1	33.3%	0	N/A	0	0.0%
Psychological Intimidation	2	2.6%	3	7.7%	0	0.0%	0	N/A	0	0.0%
Verbal Non-Compliance	2	2.6%	1	2.6%	1	33.3%	0	N/A	0	0.0%
Passive Resistance	6	7.7%	1	2.6%	0	0.0%	0	N/A	0	0.0%
Compliant	4	5.1%	4	10.3%	0	0.0%	0	N/A	0	0.0%
Unknown	2	2.6%	0	0.0%	1	33.3%	0	N/A	0	0.0%

Table 17: **Types of resistance to force in 2021, not treating pointing or displaying a firearm as force.** The resistance types are ordered from most (Deadly Force) to least (Compliant) severe. Each person-incident was categorized by its most severe type of resistance.

Tables 18 and 19 display information on subject and officer injuries. White subjects of force are most likely to get injured. Among subjects who are injured, the vast majority experience "Other Minor" injuries. When pointing or displaying a firearm is not treated as a use of force, the rate of injury increases within each race.

| | All UOF | | | NPD | | |
	Total	Injured	Percent	Total	Injured	Percent
Officer-Incidents	329	28	8.5%	225	26	11.6%
White Person-Incidents	112	21	18.8%	78	20	25.6%
Black Person-Incidents	68	7	10.3%	39	6	15.4%
Asian Person-Incidents	6	1	16.7%	3	1	33.3%

Table 18: **Percent of uses of force resulting in injury in 2021.** No injured subject of force belonged to the "Some other race" category. UOF = Use of force; NPD = Not treating pointing or displaying a firearm to be a use of force.

| | White | | Black | | Asian | |
Type	N	%	N	%	N	%
Total	21	100.0%	7	100.0%	1	100.0%
None	0	0.0%	1	14.3%	0	0.0%
Other Minor	20	95.2%	5	71.4%	1	100.0%
Other Major	1	4.8%	0	0.0%	0	0.0%
Bruising	1	4.8%	0	0.0%	0	0.0%
Unconsciousness	1	4.8%	0	0.0%	0	0.0%
Unknown	0	0.0%	1	14.3%	0	0.0%

Table 19: **Types of injuries from use of force in 2021.** Percentages will not sum to 100% because any use of force may involve multiple types of injury. No injured subject of force belonged to the "Some other race" category.

Table 20 shows the percentage of subjects of force perceived to be having a mental health issue, under the influence of alcohol, or under the influence of drugs. White subjects of force are somewhat more likely than Black subjects of force to fall into one of these categories.

| | White | | Black | | Asian | | Other | | Unknown | |
Type	N	%	N	%	N	%	N	%	N	%
Total	112	100.0%	68	100.0%	6	100.0%	1	100.0%	1	100.0%
Having a mental health issue	20	17.9%	7	10.3%	1	16.7%	0	0.0%	0	0.0%
Under the influence of alcohol	20	17.9%	6	8.8%	0	0.0%	0	0.0%	0	0.0%
Under the influence of drugs	10	8.9%	4	5.9%	1	16.7%	0	0.0%	0	0.0%

Table 20: **Perceived mental state of subjects of force in 2021.** Percentages will not sum to 100% because the perceived mental states are not mutually exclusive.

Figures 23 and 24 show which incident types are most likely to involve force. Whether or not displaying or pointing a gun is considered a use of force, the incident type that is most likely to involve force is aggravated assault. Drug sales are the second-most-likely incident type to involve force when displaying or pointing a gun is considered a use of force; when displaying or pointing a gun is not considered a use of force, the likelihood that a drug sale incident involves force drops considerably. The same is true for search warrants.

The rest of the requested information can be found in the Appendix.
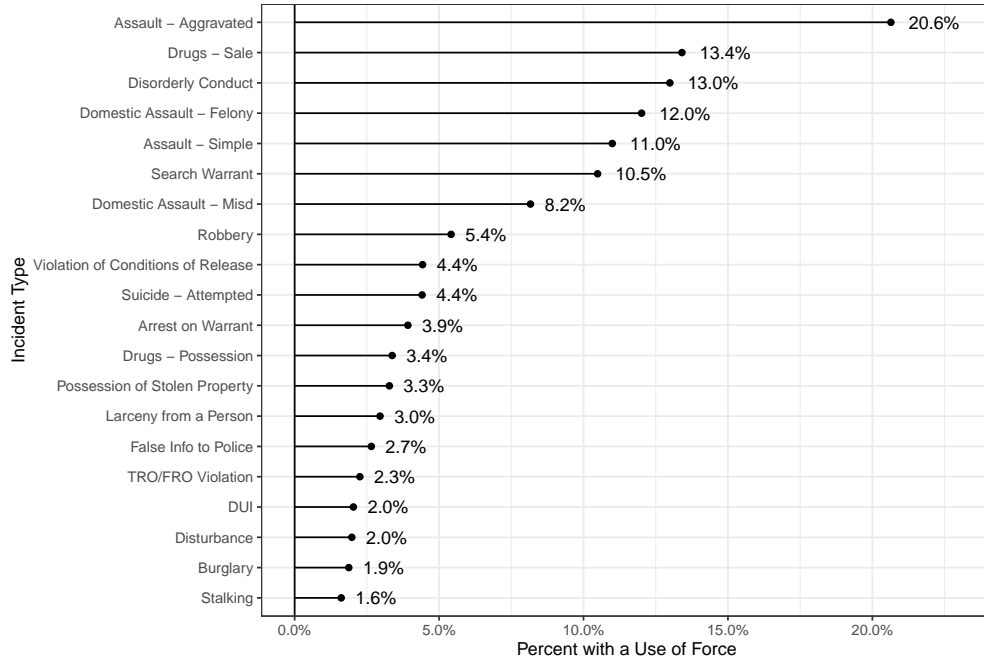
Figure 23: **Percent of incidents where force is used, by incident type, 2012-2021.** Only the twenty incident types with the highest rates of force are displayed; only incident types with at least one hundred incidents over this ten-year period were considered for this figure.
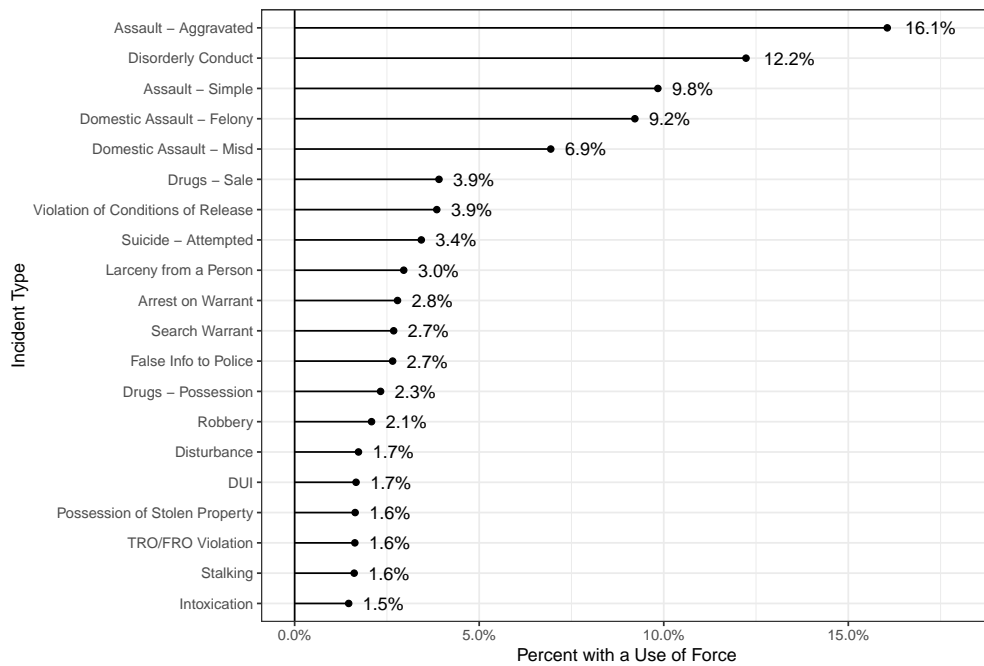

Figure 24: **Percent of incidents where force is used, by incident type, 2012-2021, not counting pointing or displaying a gun as a use of force.** Only the twenty incident types with the highest rates of force are displayed; only incident types with at least one hundred incidents over this ten-year period were considered for this figure.

8 References

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[6] Burlington Police Department. DD05 Statewide Policy on Police Use of Force;. Effective October 1, 2021. Available from: `https://www.burlingtonvt.gov/sites/default/files/DD05%20Statewide%20Policy%20on%20Police%20Use%20of%20Force.pdf`.

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9 Appendix

9.1 Corrections

This version of the report differs from the original, published on May 20, 2022, at `https://go.boarddocs.com/vt/burlingtonvt/Board.nsf/files/CELNWW61B70C/$file/BPD%20Annual%20Report%202021.pdf`, in the following ways:

1. In the May 20 version, some felonies were erroneously categorized as misdemeanors. This version correctly categorizes each charge as either a felony or misdemeanor. This error was also corrected in an addendum to the original report, which was published on May 24, 2022, at `https://go.boarddocs.com/vt/burlingtonvt/Board.nsf/files/CEQKYZ530B50/$file/BPD%20Annual%20Report%202021%20Addendum.pdf`.

2. In the May 20 version, the incident type "911 Hangup" was categorized as a Priority 2 incident, when it is actually a Priority 1 incident. This version correctly categorizes "911 Hangup" as a Priority 1 incident.

3. The May 20 version described prosecutors as being involved in determining whether an arrestee should be lodged vs. cited. This version removes that language.

9.2 Additional Notes on Data Quality

Traffic Stops In 2021, 50.1% of the traffic stops were made by one officer. The next most prolific officer made 5.1% of the traffic stops in 2021.

The State of Vermont requires police departments to report information on traffic stops through 20 V.S.A. § 2366 [7]. The Valcour Governance Board [8] submits these data on behalf of all agencies using Valcour. They identify as a traffic stop any ticket where at least one of the following fields has been completed:

1. Perceived race;

2. Reason for stop;

3. Reason for search;

4. Contraband; or

5. Outcome of stop.

Note that these five fields may be filled out even if a written or electronic ticket was never actually issued. An auditor can ensure that a ticket is reported as a stop by filling out at least one of these fields, and can ensure that a ticket is not reported as a stop by setting all five of these fields back to the default blank value. As stated above, setting perceived race to blank does not delete a person's race information entirely from Valcour; it only deletes the perceived race from that specific stop. Since this method of identifying traffic stops allows for the correction of errors, it was used as the basis for the auditing procedure used to identify traffic stops in 2021.

This is the auditing procedure for traffic stops in 2021:

1. All tickets where at least one of the aforementioned five fields was completed were examined, using a spreadsheet, for missing or illogical data. "Illogical data" includes driver age equal to zero, call type unrelated to traffic, etc.

2. The narratives of incidents with missing or illogical data were read by the auditor. Incorrect data were corrected and, if the incident was not actually a stop, the five fields above were set to blank. Missing data were filled out to the extent possible. If perceived race was missing, this was only entered by the officer who made the stop.

3. All incidents identified as stops by the algorithm described in Section 5 but that didn't have any of the five fields filled out were read. If any incident was actually a stop, the fields above were filled out to the extent possible.

4. Incidents that had one of these five fields filled out but which were not identified as stops by the algorithm were read. If they were not actually stops, the five fields mentioned above were set to blank.

5. A second algorithm was used to scrape text fields in Valcour to find mentions of searches. Flagged narratives were read to determine if the associated incidents were traffic stops. If they were, the five fields were filled out to the extent possible.

At the end of this process, incidents with at least one of the five fields filled out were considered to be traffic stops for 2021.

Arrests   The primary factor affecting the quality of arrest data is expungement. Chapter 230 of Vermont's Title 13 governs which charges may be expunged and under what circumstances [9]. Since expungement is something that happens to charges, not arrests, the procedure is different depending on whether every charge in an arrest is expunged or just some of the charges are expunged. If every charge is expunged, all of the arrestee's personal details are removed from the arrest in Valcour. This includes both identifying details, like name and date of birth, and non-identifying details, like gender and race. Information about the arrest itself, including the date, time, type, and charges, remain. If only some charges are expunged, the Records Department must carry out a two-step process. First, they expunge the entire arrest; then, they add back in the non-expunged charges. Note that this process leaves behind two arrests: the original arrest, which has all charges but no information about the arrestee, and the "new" arrest, which has only the non-expunged charges and information about the arrestee. Note also that it is impossible to faithfully differentiate between (a) an incident where two people were arrested and one person had all their charges expunged, and (b) an incident where one person was arrested and had some of their charges expunged. Thus, it is impossible to get an accurate count of arrests in any given year. This is in addition to the fact that the expungement of race information makes it impossible to get an accurate count of arrests by race in any given year.

The number of people referred to the CJC is an undercount. Many people who are referred to the CJC are recorded as being cited, probably because officers do fill out a citation for these individuals (they just don't submit the citation to court), and because the drop-down menu where officers would record sending someone to the CJC lists citation first. The Records team at BPD started auditing arrests on a weekly basis in 2022 to ensure accurate reporting.

If an officer wants to arrest someone and cannot locate them, they will request a warrant. If the defendant is eventually found, the officer who finds them is supposed to create a new incident and record that they have made an arrest on warrant. In the 2020 Annual Report, and in reporting to the FBI, the warrant request and the arrest on warrant are counted as two separate arrests, even though the warrant request does not actually involve handing someone a citation or taking them into custody. This report also counts both, for the following reasons:

1. It is impossible to faithfully link the request for a warrant to the eventual arrest on that warrant. Using first name/last name/date of birth doesn't work because so many charges are expunged. Sometimes, the eventual arrest on warrant is never recorded as such in Valcour, or it is made and recorded by another agency. Sometimes, the person is never found.

2. Even though a warrant request does not involve handing someone a citation or taking them into custody, it leads to one of those things happening eventually.

Uses of Force   Data on uses of force for this report come from two sources, FACTS and Valcour. Any switch from one database to another presents data quality issues. For one, FACTS did not have access to the person- and incident-level data that are stored in Valcour. As a result, officers had to manually enter data like names and incident numbers into FACTS, resulting in spelling errors that had to be corrected manually in order to merge information from FACTS and Valcour. This is an excellent example of why data entry systems need to be structured to prevent users from even having the opportunity to make mistakes. If FACTS had had an autocomplete feature connected to the Valcour database, officers could have selected the person they wanted and not been obligated to enter in the names manually. Another data quality issue resulting from the change from FACTS to Valcour is non-matching categorization schemes; FACTS used different categories for uses of force than Valcour.

Officers do not exclusively draw their firearm before interacting with individuals in an incident, and, without reading narratives in Valcour, it is impossible to determine what happened first. In fact, this is true of any type of force; without reading narratives, it is impossible to determine the order of events. Since January 2021, the BPD has summarized every use of force on a monthly basis and posted those summaries publicly (see `https://www.burlingtonvt.gov/police/use_of_force_reports`). These summaries allow the public to see the order of events any time force is used.

This qualitative information is vital for understanding police use of force, but it cannot be used on its own to rule out bias. Readers of these summaries can determine the probability that someone is Black, given that force was used, but not the probability that force is used, given that someone was Black. Similarly, readers can determine whether force is justified, given that it was used, but not whether force is used, given that it was justified. Consider the case where force is used every time it is justified against a Black person, but force is used only some of the times it is justified against a White person. This is a disparity, but it is impossible to detect just by looking at the cases where force was used. The only way to truly rule out bias is to look at incidents where the circumstances are similar, and see which ones led to force being used and which ones didn't.

9.3 Additional Analysis

One of the functions of this report is to track racial disparities in traffic stops, arrests, and uses of force. Compared to Census data, Black people are over-represented in arrests and uses of force. This over-representation is a serious problem, and identifying the cause may help in finding a solution. Officer bias is frequently proposed as a cause, but it can be difficult to either detect or rule out officer bias using only the information in Valcour.

Consider arrests: Table 11 shows the probability that someone is Black, given that they are arrested, gut not the probability that someone is arrested, given that they are Black. The fact that these are different may be more clear using a non-policing example. If someone has a mutation in the BRCA1 or BRCA2 genes, their probability of developing breast cancer by age 70 is between 45% and 65%. However, if someone has breast cancer, their probability of having a mutation in the BRCA1 or BRCA2 genes is only 5% to 10% [10]. In other words, BRCA mutations strongly predict breast cancer, but there are so many causes of breast cancer (e.g., genetics, smoking, alcohol use, radiation exposure, hormone replacement therapy, etc.) that having breast cancer doesn't necessarily mean you have a BRCA mutation. In fact, most people with breast cancer *don't* have a BRCA mutation.

Returning to arrests and race, bias is the mutation and the high proportion of Black people among arrestees is cancer. If Burlington police officers are arresting Black people for things that they aren't arresting White people for, Black people will be over-represented in arrests. But there are so many causes of arrests (e.g., bias, poverty, a history of trauma, lead exposure, exclusionary hiring practices that force people into underground economies, addiction, homelessness, etc.) that Black people being over-represented in arrests is not, on its own, enough evidence to conclude that Burlington police officers are arresting Black people for things that they would not arrest White people for.

This report is not claiming that there is or is not bias when it comes to arrests; the point is that there is not enough evidence in these numbers to make a claim either way. Part of the problem is that Valcour only contains information on policing, but the pathway to an arrest can be far longer and more complicated than just an individual's interaction with the police. It is undeniably a large and urgent problem that Black people are over-represented among arrestees. Teasing apart the reasons for an arrest, and identifying opportunities for intervention and prevention, requires more comprehensive and interconnected data. Using just the data in Valcour, it is difficult to assess whether the same behavior leads to different outcomes for White and Black people.

Uses of force, on the other hand, may be different. The specifics of an incident may have more influence over whether force is used than earlier factors. For example, Table 14 shows that White and Black arrestees for violent offenses are about equally likely to be subjects of force, but Black arrestees for non-violent offenses are more likely to be subjects of force than White arrestees for non-violent offenses. The 2020 Annual Report identified a number of variables, including age, gender, location, time of day, and day of week, that are related to use of force. This section uses two statistical analyses to examine those variables, and others, simultaneously, in order to identify the contribution of each variable while holding the others

constant.

The first analysis is standard logistic regression, and it's probably the most common analysis for predicting a binary outcome from several variables. For this analysis, the unit of observation is person-incident. This analysis does not take into account officer identity because there are too many officers to include each as their own variable. In logistic regression, there needs to be enough events per variable to accurately estimate the effects of those variables. Here, the event is a use of force, and since these are relatively rare, there cannot be too many variables in the regression model. Table 21 shows the number of events and observations.

	Standard	Mixed Effects
Number of observations	73,717	170,301
Number of observations with a violent offense	831	3,803
Number of events	469	870
Number of events with a violent offense	118	271
Number of events (NPD)	325	609
Number of events with a violent offense (NPD)	100	230

Table 21: **Number of observations and events.** NPD = not treating pointing or displaying a gun as a use of force.

The second analysis is mixed effects logistic regression, and it takes officer identity into account without including each officer as their own variable. Doing so requires the assumption that each officer has their own likelihood of using force, with those likelihoods falling on a bell curve. (Strictly, the log-odds of using force fall on a bell curve.) Taking officer identity into account also requires using officer-person-incident as the unit of observation. In other words, each unique pairing of an officer and a non-officer within an incident is considered its own observation. One limitation of this analysis is that it is often the case that an officer attached to an incident will never interact with some of the people attached to that incident. For instance, officers may split up interviews with witnesses in order to save time.

Since the FACTS database does not have information on which officer used force, this analysis will only look at the time period from April 27, 2019 (the date of the first use of force recorded in Valcour after the last use of force recorded in FACTS), through December 31, 2021. One officer had only two person-incidents in this time frame; they were the only officer with fewer than ten person-incidents, and they never used force. They were removed from analysis.

For each analysis, the outcome is whether force was used in that unit of observation (person-incident or officer-person-incident). Each analysis has the following variables:

1. Subject-level

   (a) Black: This is 1 if the subject is Black and 0 otherwise.

   (b) Male: This is 1 if the subject is male and 0 otherwise.

   (c) Under 20 years old: This is 1 if the subject is under 20 years old, and 0 otherwise.

   (d) 20 to 29 years old: This is 1 if the subject is 20 to 29 years old and 0 otherwise.

   (e) 30 to 39 years old: This is 1 if the subject is 30 to 39 years old and 0 otherwise.

   (f) 40 to 49 years old: This is 1 if the subject is 40 to 49 years old and 0 otherwise. Subjects who are 50 or older have values of 0 for each of the age group variables.

2. Incident-level

   (a) Violent offense: This is 1 if the subject was suspected of a violent crime as part of the incident and 0 otherwise. "Suspected of" is used here, as opposed to "arrested for", because officers sometimes do not charge individuals who are observed committing a crime.

   (b) Downtown, weekend, after midnight: This is 1 if the incident occurs between midnight and 3:59a.m., on Saturday or Sunday, downtown; and 0 otherwise.

   (c) Alcohol-related: This is 1 if the incident is alcohol-related and 0 otherwise.

(d) Mental health-related: This is 1 if the incident is mental health-related and 0 otherwise

(e) Drug-related: This is 1 if the incident is drug-related and 0 otherwise.

3. Combination

(a) Black, violent offense: This is 1 if the subject is Black and suspected of a violent crime as part of the incident, and 0 otherwise.

The final variable requires additional explanation. As shown in Table 14, the effect of race is not the same for different levels of arrest severity. Black people who are arrested for a violent crime are about as likely to be subjects of force as White people who are arrested for a violent crime. However, Black people who are arrested for a non-violent crime are more likely to be subjects of force than White people who are arrested for a non-violent crime. This phenomenon is known in statistics as "moderation", and is accommodated with a variable known as an "interaction term". In this analysis, the interaction term is for the combined effect of race and violence.

The results of these analyses are in Table 22. Each value under "Odds Ratio" states how the odds of a use of force change if the corresponding variable changes from a 0 to a 1. For example, the value next to "Male" is 1.617 for the standard logistic regression analysis. This means that, all else being equal, the odds of a male being the subject of force are 1.617 times the odds of a non-male being the subject of force.

Because of the aforementioned interaction term, the odds ratios for "Violent offense", "Black", and "Black, violent offense" have special interpretations. The odds ratio next to "Black" just compares the odds of a use of force for a Black person to a White person when both are *not* suspected of a violent offense (and are identical on all other variables). To compare the odds of a use of force for a Black person to a White person when both *are* suspected of a violent offense (and are identical on all other variables), one must multiply the odds ratio next to "Black" by the odds ratio next to "Black, violent offense". For the standard logistic regression, this is approximately 1.158, and for the mixed effects model, this is approximately 0.817.

Variable	Standard		Mixed Effects	
	Odds Ratio	p-Value	Odds Ratio	p-Value
Violent offense	26.025	< 0.001	21.972	< 0.001
Black	3.445	< 0.001	3.359	< 0.001
Alcohol-related	3.385	< 0.001	2.465	< 0.001
Under 20 years old	3.003	< 0.001	2.397	< 0.001
Drug-related	2.786	< 0.001	1.682	< 0.001
20 to 29 years old	2.660	< 0.001	1.869	< 0.001
30 to 39 years old	2.643	< 0.001	2.298	< 0.001
Downtown, weekend, after midnight	2.523	< 0.001	1.554	0.003
Mental health-related	2.466	< 0.001	2.373	< 0.001
40 to 49 years old	1.698	0.009	1.506	0.005
Male	1.617	< 0.001	1.517	< 0.001
Black, violent offense	0.336	< 0.001	0.243	< 0.001

Table 22: **Regression results for use of force.**

The p-value represents the probability of observing results at least this extreme if there is truly no effect of the corresponding variable. For example, if a person's gender truly has no effect on their probability of being the subject of force, then according to the straightforward logistic regression analysis, the probability that we would see an odds ratio this far from 1 is less than 1 out of 1,000. (An odds ratio of 1 would indicate that the two odds are equal.) In statistics, it is common to use a cut-off of 0.05 or 0.01 to decide whether a result is "statistically significant" or not. That is, if a p-value is less than 0.05 (or 0.01, to be more conservative), then the corresponding result is statistically significant. Both analyses identified all variables in the table as being statistically significant.

Although it is not evident from the table, the odds ratio obtained by multiplying the odds ratio for "Black" by the odds ratio for "Black, violent offense" is not statistically significant, for either analysis. As

stated previously, this combined odds ratio compares the odds of a use of force for a Black person to a White person when both *are* suspected of a violent offense (and are identical on all other variables). This essentially confirms the results in Table 14: Among people suspected of a violent crime, Black people are about as equal as White people to be subjects of force. Among people not suspected of a violent crime, however, Black people are more likely to be subjects of force.

Table 23 contains the results of both regression analyses, but where drawing or pointing a firearm is not considered to be a use of force. The results are similar to the results using all uses of force, except that the odds ratio for "Black" is not as great as the odds ratios for "Alcohol-related" and "Mental health-related". Also, for the mixed effects model, the odds ratio for "Downtown, weekend, after midnight" is no longer significant.

| | Standard | | Mixed Effects | |
Variable	Odds Ratio	p-Value	Odds Ratio	p-Value
Violent offense	31.686	< 0.001	27.050	< 0.001
Alcohol-related	4.315	< 0.001	2.981	< 0.001
Mental health-related	3.257	< 0.001	3.091	< 0.001
Black	2.718	< 0.001	2.730	< 0.001
20 to 29 years old	2.699	< 0.001	1.947	< 0.001
30 to 39 years old	2.564	< 0.001	2.250	< 0.001
Under 20 years old	2.559	< 0.001	1.961	0.001
Downtown, weekend, after midnight	2.221	0.001	1.193	0.370
40 to 49 years old	1.718	0.023	1.633	0.004
Drug-related	1.654	0.006	1.340	0.019
Male	1.444	0.006	1.322	0.005
Black, violent offense	0.397	0.001	0.293	< 0.001

Table 23: **Regression results for use of force, not counting displaying or pointing a gun as a use of force.**

9.4   Additional Tables and Figures

Traffic Stops   Table 24 shows the locations of traffic stops in 2021. Tables 27 and 28 contain outcomes and racial shares of the most common traffic violations in 2021. There appears to be a great deal of overlap in the meaning of some of the violations. In 2021, both "Regulations In Municipalities" and "Traffic Control Signals" were used to describe failing to stop at a red light; both "Regulations In Municipalities" and "Stop Sign" were used to describe failing to stop at a stop sign; and both "Illuminations Required" and "Lights" were used to describe broken tail lights. "Driving On Roadways Laned For Traffic" means that the driver was in the wrong lane; in 2021, examples of this included driving in the bike lane and crossing the yellow center line to drive on the wrong side of the street. "Persons Required To Register" means an expired or missing registration. Figure 25 shows the percentage of traffic stops that result in arrest or search, by race, and Figure 26 shows the percentage of searches that yield certain outcomes, by race.

Arrests   As Table 25 shows, most arrests in 2021 were not for drug charges. Tables 29 and 30 show the most common charges in 2021. Table 31 contains the location of arrests by race. Most arrests occurred downtown or the in the Old North End.

Figures 27 and Figure 28 show how the number of, and racial composition of, arrests has changed over time, for racial groups with very low numbers of arrests.

Uses of Force   Table 26 contains information on the location of uses of force. Overall, uses of force were most likely to occur in the Old North End or Downtown, and least likely to occur in the New North End. Black subjects of force were more likely to be in the University Hill Section and less likely to be in the Old North End than White subjects of force. Figures 29 and 30 show how counts of uses of force have changed
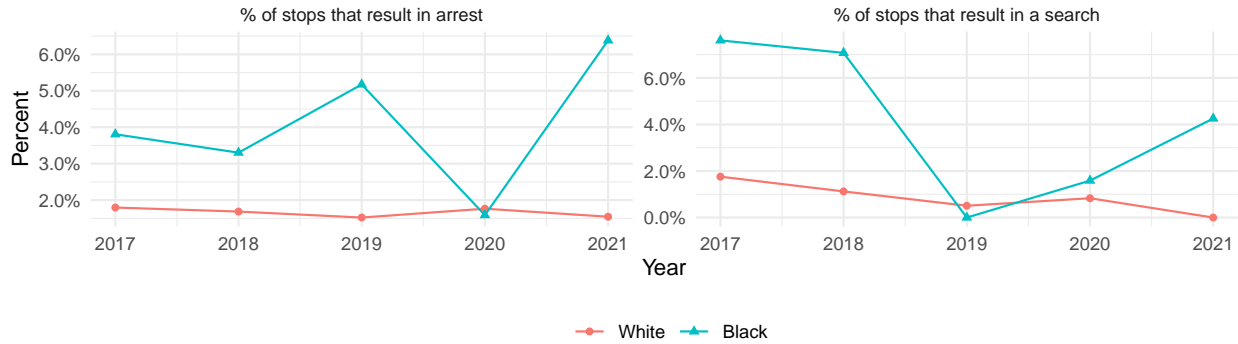
Figure 25: **Percentage of traffic stops that result in arrest or search, by race.** This figure excludes externally-generated stops. Note that the vertical or *y*-axes have different scales.

over time, for racial groups with very low numbers of uses of force. Table 32 shows types of force for specific types of resistance for White subjects of force in 2021, and Table 33 shows the same information but for Black subjects.

	White		Black		Asian		Hispanic		Unknown	
Neighborhood	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Total	583	100.0%	47	100.0%	32	100.0%	2	100.0%	9	100.0%
Downtown	143	24.5%	12	25.5%	10	31.2%	1	50.0%	2	22.2%
New North End	24	4.1%	5	10.6%	1	3.1%	0	0.0%	0	0.0%
Old North End	121	20.8%	8	17.0%	9	28.1%	0	0.0%	4	44.4%
Outside Burlington	18	3.1%	0	0.0%	1	3.1%	0	0.0%	0	0.0%
South End	193	33.1%	14	29.8%	8	25.0%	0	0.0%	2	22.2%
University Hill Section	84	14.4%	8	17.0%	3	9.4%	1	50.0%	1	11.1%

Table 24: **Locations of traffic stops in 2021.** This table excludes externally-generated stops.

	Total		Possession		Sale	
Race	**N**	**%**	**N**	**%**	**N**	**%**
White	736	100.0%	20	2.7%	10	1.4%
Black or African American	199	100.0%	5	2.5%	9	4.5%
American Indian and Alaska Native	1	100.0%	0	0.0%	0	0.0%
Asian	32	100.0%	0	0.0%	0	0.0%
Some other race	3	100.0%	0	0.0%	0	0.0%
Missing race	16	100.0%	0	0.0%	0	0.0%

Table 25: **Drug status of arrests in 2021.** Percentages will not sum to 100% because drug status is specific to charge, not arrest, and some arrests have multiple charges. No Pacific Islanders were arrested in 2021.
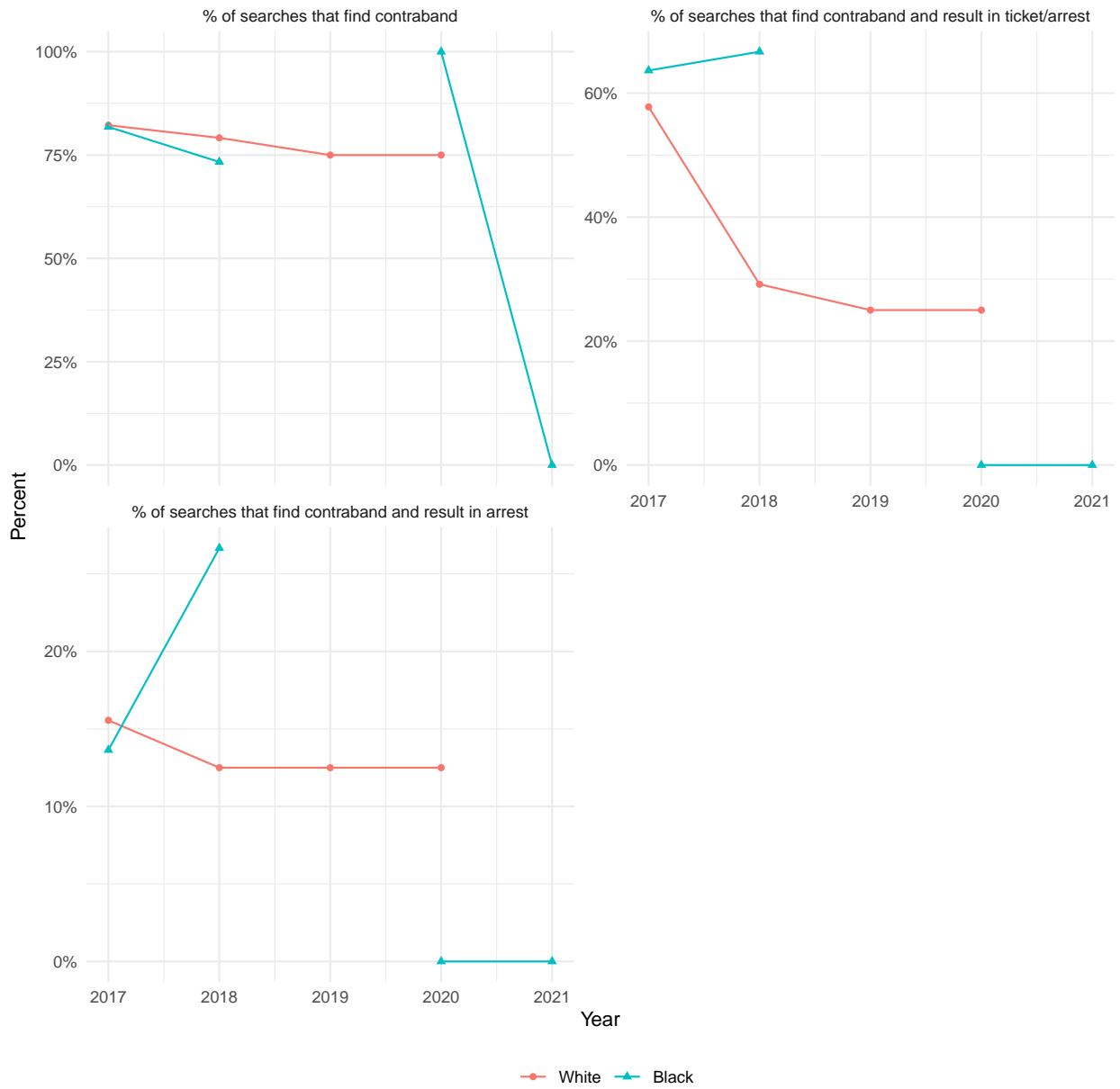
Figure 26: **Percentage of traffic stops and searches that yield certain outcomes, by race.** This figure excludes externally-generated stops.
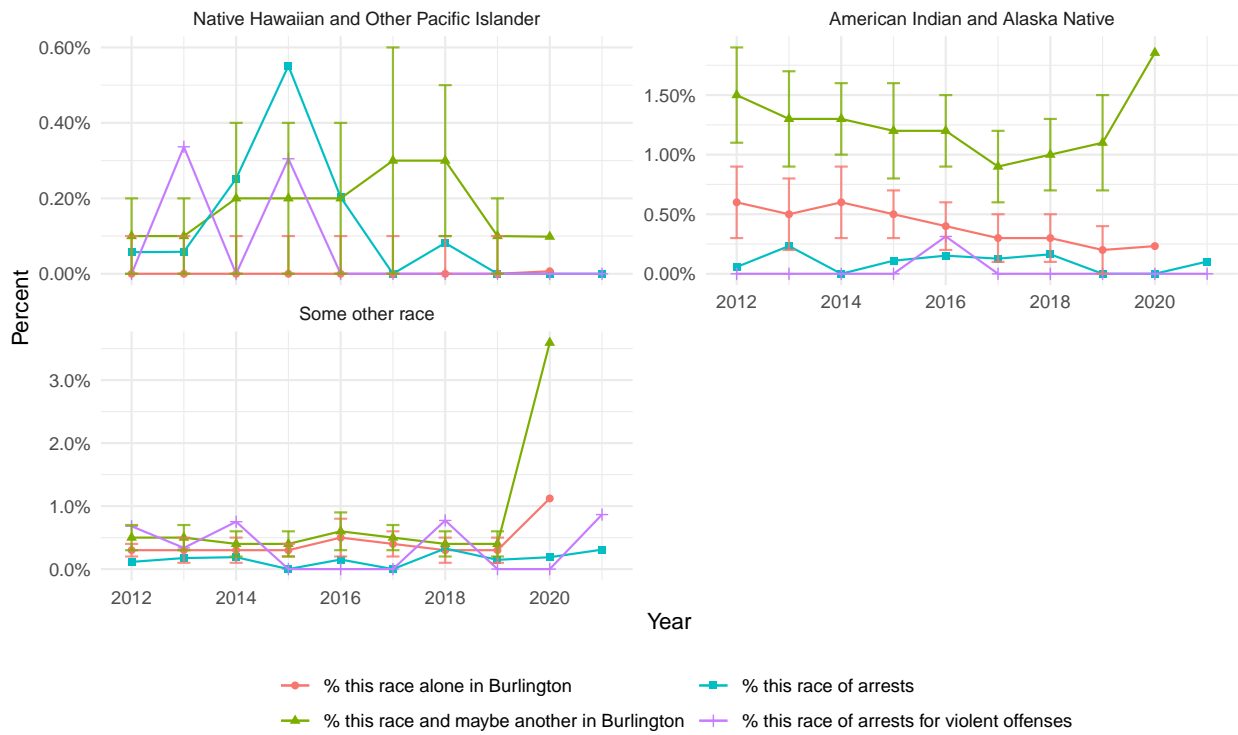
Figure 27: **Change over time in the racial composition of arrests (less common racial groups).** Note that the vertical or y-axis is different for each plot.
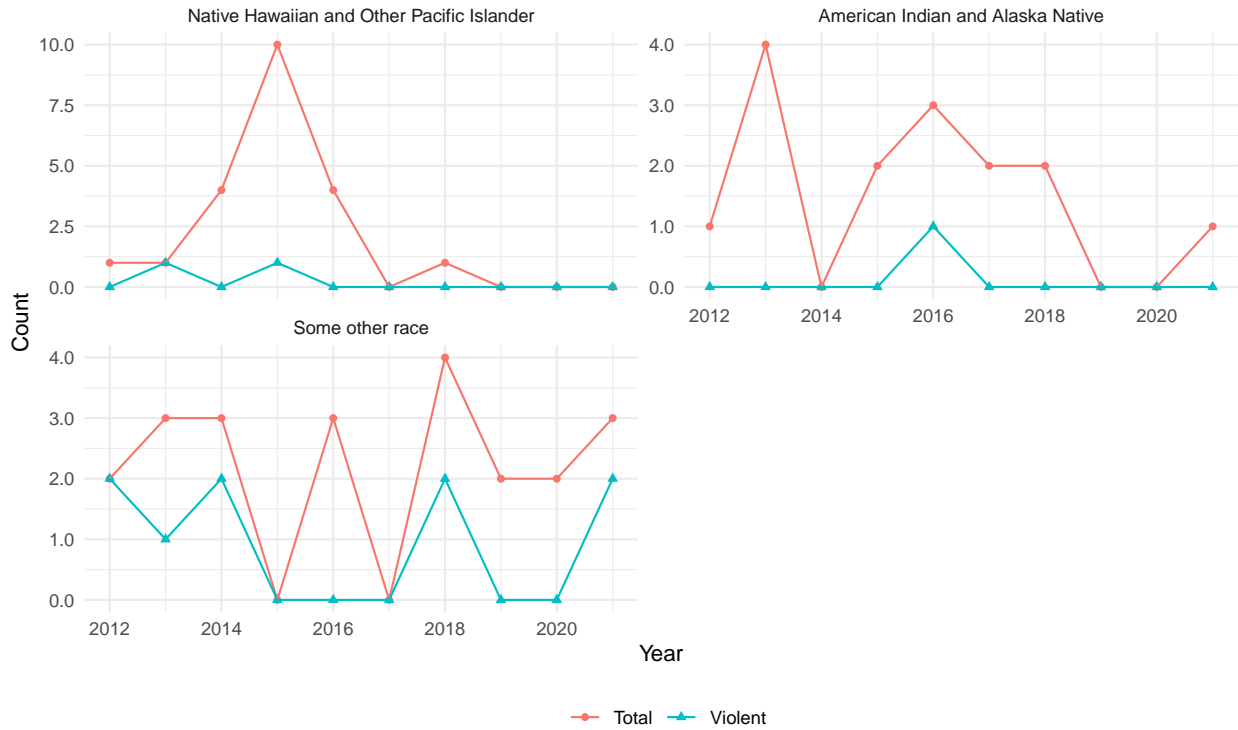
Figure 28: **Change over time in the number of arrests (less common racial groups).** Note that the vertical or y-axis is different for each plot.
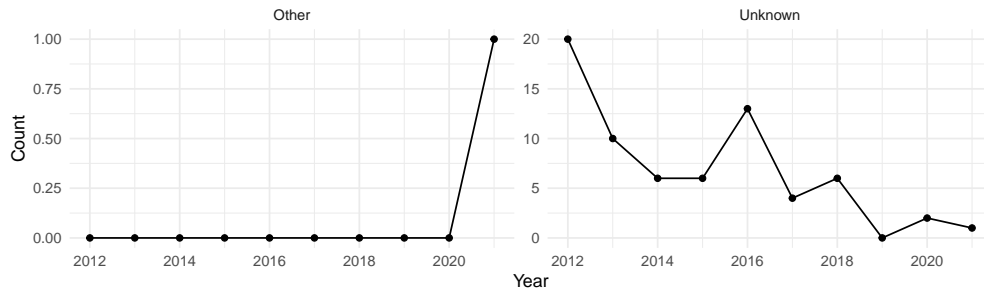
Figure 29: **Change over time in the number of uses of force (less common racial groups).** Note that each plot has a different vertical or y-axis.
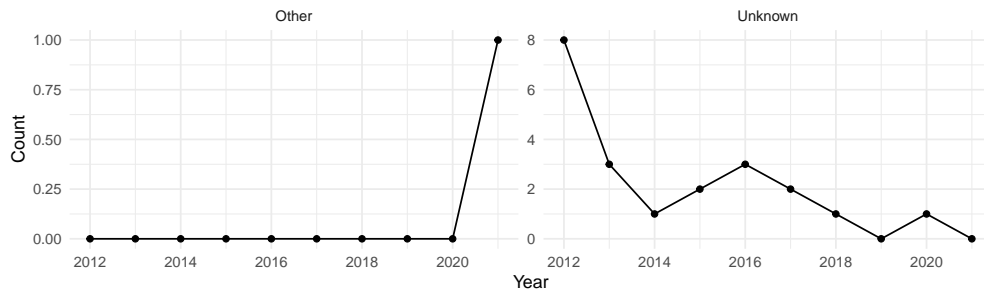
Figure 30: **Change over time in officers drawing or pointing their gun (less common racial groups).** Note that each plot has a different vertical or y-axis.

| | White | | Black | | Asian | | Other | | Unknown | |
Type	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Total	112	100.0%	68	100.0%	6	100.0%	1	100.0%	1	100.0%
Downtown	30	26.8%	23	33.8%	3	50.0%	0	0.0%	1	100.0%
New North End	11	9.8%	6	8.8%	0	0.0%	0	0.0%	0	0.0%
Old North End	40	35.7%	15	22.1%	2	33.3%	1	100.0%	0	0.0%
Outside Burlington	2	1.8%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
South End	13	11.6%	7	10.3%	0	0.0%	0	0.0%	0	0.0%
University Hill Section	16	14.3%	17	25.0%	1	16.7%	0	0.0%	0	0.0%

Table 26: **Neighborhoods where force was used in 2021.**

Violation	Total		Ticket		Warning		No Action		Arrest	
	N	%	N	%	N	%	N	%	N	%
20 MPH Over Speed Limit	148	100.0%	45	30.4%	100	67.6%	0	0.0%	3	2.0%
Regulations In Municipalities	106	100.0%	10	9.4%	95	89.6%	0	0.0%	1	0.9%
10 MPH Over Speed Limit	44	100.0%	9	20.5%	35	79.5%	0	0.0%	0	0.0%
Traffic Control Signals	44	100.0%	8	18.2%	36	81.8%	0	0.0%	0	0.0%
Driving On Roadways Laned For Traffic	28	100.0%	2	7.1%	23	82.1%	0	0.0%	3	10.7%
Stop Sign	25	100.0%	4	16.0%	20	80.0%	0	0.0%	1	4.0%
Using Portable Electronic Device	23	100.0%	16	69.6%	7	30.4%	0	0.0%	0	0.0%
Persons Required To Register	20	100.0%	6	30.0%	13	65.0%	1	5.0%	0	0.0%
Illuminations Required	19	100.0%	0	0.0%	19	100.0%	0	0.0%	0	0.0%
Lights	19	100.0%	0	0.0%	18	94.7%	0	0.0%	1	5.3%

Table 27: **Outcomes of the most common traffic violations in 2021.** "Using Portable Electronic Device" is short for "Using Portable Electronic Device Outside Work or School Zone–1st violation". This table excludes externally-generated stops.

Violation	Total		White		Black		Asian		Hispanic		Unknown	
	N	%	N	%	N	%	N	%	N	%	N	%
20 MPH Over Speed Limit	148	100.0%	130	87.8%	11	7.4%	6	4.1%	0	0.0%	1	0.7%
Regulations In Municipalities	106	100.0%	95	89.6%	5	4.7%	5	4.7%	1	0.9%	0	0.0%
10 MPH Over Speed Limit	44	100.0%	41	93.2%	1	2.3%	1	2.3%	1	2.3%	0	0.0%
Traffic Control Signals	44	100.0%	38	86.4%	4	9.1%	2	4.5%	0	0.0%	0	0.0%
Driving On Roadways Laned For Traffic	28	100.0%	20	71.4%	3	10.7%	4	14.3%	0	0.0%	1	3.6%
Stop Sign	25	100.0%	24	96.0%	0	0.0%	1	4.0%	0	0.0%	0	0.0%
Using Portable Electronic Device	23	100.0%	23	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Persons Required To Register	20	100.0%	16	80.0%	2	10.0%	2	10.0%	0	0.0%	0	0.0%
Illuminations Required	19	100.0%	16	84.2%	1	5.3%	2	10.5%	0	0.0%	0	0.0%
Lights	19	100.0%	15	78.9%	1	5.3%	3	15.8%	0	0.0%	0	0.0%

Table 28: **Racial share of the most common traffic violations in 2021.** "Using Portable Electronic Device" is short for "Using Portable Electronic Device Outside Work or School Zone–1st violation". This table excludes externally-generated stops.

Charge	Total N	%	Cited N	%	Lodged N	%	Warrant N	%	Request N	%	CJC N	%
Unlawful Trespass (Misdemeanor)	75	100.0%	49	65.3%	7	9.3%	0	0.0%	0	0.0%	19	25.3%
Simple Assault	74	100.0%	44	59.5%	3	4.1%	1	1.4%	7	9.5%	19	25.7%
Aggravated Assault	39	100.0%	18	46.2%	18	46.2%	0	0.0%	3	7.7%	0	0.0%
Retail Theft (Misdemeanor)	39	100.0%	25	64.1%	0	0.0%	0	0.0%	7	17.9%	7	17.9%
Disorderly Conduct - All Other	36	100.0%	18	50.0%	5	13.9%	0	0.0%	0	0.0%	13	36.1%
Unlawful Mischief (Misdemeanor)	36	100.0%	21	58.3%	3	8.3%	0	0.0%	3	8.3%	9	25.0%
Violation of an Abuse Prevention Order	36	100.0%	29	80.6%	5	13.9%	0	0.0%	2	5.6%	0	0.0%
Violation of Conditions of Release (Travel, Curfew, or Contact)	36	100.0%	26	72.2%	6	16.7%	0	0.0%	4	11.1%	0	0.0%
Domestic Assault	33	100.0%	26	78.8%	6	18.2%	0	0.0%	1	3.0%	0	0.0%
Burglary	30	100.0%	11	36.7%	12	40.0%	0	0.0%	6	20.0%	1	3.3%

Table 29: **Type of arrest for the top 11 charges in 2021.** "Warrant" means "Arrested on Warrant", "Request" means "Warrant Request", and "CJC" means "Referred to the Community Justice Center".

Charge	Total N	%	White N	%	Black N	%	Asian N	%	Other N	%	Missing N	%
Unlawful Trespass (Misdemeanor)	75	100.0%	66	88.0%	7	9.3%	0	0.0%	1	1.3%	1	1.3%
Simple Assault	74	100.0%	48	64.9%	21	28.4%	2	2.7%	1	1.4%	2	2.7%
Aggravated Assault	39	100.0%	23	59.0%	16	41.0%	0	0.0%	0	0.0%	0	0.0%
Retail Theft (Misdemeanor)	39	100.0%	38	97.4%	0	0.0%	0	0.0%	0	0.0%	1	2.6%
Disorderly Conduct - All Other	36	100.0%	24	66.7%	10	27.8%	2	5.6%	0	0.0%	0	0.0%
Unlawful Mischief (Misdemeanor)	36	100.0%	29	80.6%	5	13.9%	2	5.6%	0	0.0%	0	0.0%
Violation of an Abuse Prevention Order	36	100.0%	29	80.6%	4	11.1%	1	2.8%	0	0.0%	2	5.6%
Violation of Conditions of Release (Travel, Curfew, or Contact)	36	100.0%	29	80.6%	7	19.4%	0	0.0%	0	0.0%	0	0.0%
Domestic Assault	33	100.0%	23	69.7%	7	21.2%	1	3.0%	0	0.0%	2	6.1%
Burglary	30	100.0%	23	76.7%	6	20.0%	0	0.0%	0	0.0%	1	3.3%

Table 30: **Race for the top 11 charges in 2021.** The categories "American Indian and Alaska Native" and "Native Hawaiian and Other Pacific Islander" are not represented here because no members of these groups were arrested for these charges.

Race	Total N	%	D N	%	ONE N	%	UHS N	%	SE N	%	NNE N	%	OB N	%	Missing N	%
White	736	100.0%	256	34.8%	185	25.1%	116	15.8%	112	15.2%	47	6.4%	16	2.2%	4	0.5%
Black or African American	199	100.0%	78	39.2%	53	26.6%	26	13.1%	18	9.0%	14	7.0%	8	4.0%	2	1.0%
American Indian and Alaska Native	1	100.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Asian	32	100.0%	7	21.9%	14	43.8%	4	12.5%	1	3.1%	6	18.8%	0	0.0%	0	0.0%
Some other race	3	100.0%	1	33.3%	1	33.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	33.3%
Missing race	16	100.0%	4	25.0%	3	18.8%	2	12.5%	4	25.0%	2	12.5%	1	6.2%	0	0.0%

Table 31: **Location of arrests in 2021.** D = Downtown, ONE = Old North End, UHS = University/Hill Section, SE = South End, NNE = New North End, and OB = Outside Burlington.

Type	DF N	%	A N	%	AR N	%	PI N	%	VNC N	%	PR N	%	C N	%	Missing N	%
Total	2	100.0%	24	100.0%	38	100.0%	4	100.0%	3	100.0%	13	100.0%	24	100.0%	4	100.0%
Empty Hand Controls	2	100.0%	18	75.0%	30	78.9%	1	25.0%	1	33.3%	2	15.4%	2	8.3%	2	50.0%
Firearm Pointed	1	50.0%	3	12.5%	6	15.8%	2	50.0%	1	33.3%	6	46.2%	19	79.2%	2	50.0%
Firearm Displayed	1	50.0%	0	0.0%	1	2.6%	1	25.0%	2	66.7%	5	38.5%	5	20.8%	0	0.0%
Other Force Used	1	50.0%	9	37.5%	6	15.8%	0	0.0%	0	0.0%	1	7.7%	0	0.0%	0	0.0%
Taser Displayed	1	50.0%	6	25.0%	5	13.2%	2	50.0%	1	33.3%	2	15.4%	1	4.2%	0	0.0%
Handcuff Control Techniques	0	0.0%	5	20.8%	3	7.9%	0	0.0%	1	33.3%	1	7.7%	0	0.0%	0	0.0%
Taser Used	2	100.0%	3	12.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Pepper Spray Used	0	0.0%	2	8.3%	2	5.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Projectile Launcher Displayed	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	4.2%	0	0.0%
Projectile Launcher Used	0	0.0%	1	4.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Pepper Spray Displayed	0	0.0%	1	4.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Personal Impact Strike	1	50.0%	1	4.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Projectile Launcher Pointed	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Unknown	0	0.0%	1	4.2%	1	2.6%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%

Table 32: **Type of force by type of resistance, White subjects, 2021.** DF = Deadly force; A = Assaultive; AR = Active resistance; PI = Psychological intimidation; VNC = Verbal non-compliance; PR = Passive resitance; C = Compliant. Percentages may not sum to 100% because any person-incident may involve multiple types of force.

Type	DF N	DF %	A N	A %	AR N	AR %	PI N	PI %	VNC N	VNC %	PR N	PR %	C N	C %	Missing N	Missing %
Total	0	N/A	16	100.0%	17	100.0%	3	100.0%	4	100.0%	6	100.0%	19	100.0%	3	100.0%
Empty Hand Controls	0	N/A	10	62.5%	13	76.5%	1	33.3%	1	25.0%	1	16.7%	0	0.0%	0	0.0%
Firearm Pointed	0	N/A	3	18.8%	6	35.3%	0	0.0%	3	75.0%	5	83.3%	15	78.9%	3	100.0%
Firearm Displayed	0	N/A	2	12.5%	3	17.6%	0	0.0%	4	100.0%	5	83.3%	9	47.4%	0	0.0%
Other Force Used	0	N/A	6	37.5%	0	0.0%	1	33.3%	0	0.0%	0	0.0%	1	5.3%	0	0.0%
Taser Displayed	0	N/A	3	18.8%	2	11.8%	1	33.3%	0	0.0%	1	16.7%	1	5.3%	0	0.0%
Handcuff Control Techniques	0	N/A	1	6.2%	4	23.5%	0	0.0%	1	25.0%	0	0.0%	2	10.5%	0	0.0%
Taser Used	0	N/A	2	12.5%	1	5.9%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Pepper Spray Used	0	N/A	3	18.8%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Projectile Launcher Displayed	0	N/A	1	6.2%	1	5.9%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Projectile Launcher Used	0	N/A	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Pepper Spray Displayed	0	N/A	1	6.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Personal Impact Strike	0	N/A	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Projectile Launcher Pointed	0	N/A	1	6.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Unknown	0	N/A	1	6.2%	1	5.9%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%

Table 33: **Type of force by type of resistance, Black subjects, 2021.** DF = Deadly force; A = Assaultive; AR = Active resistance; PI = Psychological intimidation; VNC = Verbal non-compliance; PR = Passive resitance; C = Compliant. Percentages may not sum to 100% because any person-incident may involve multiple types of force.