Use of Force Race-Based Data Technical Report

Ministry of the Solicitor General

Ontario 2020-2022 Use of Force Data Technical Report

The *Anti-Racism Act, 2017* and its associated regulation and guidance require the Ministry of the Solicitor General to collect and analyze race-based data in police use of force. This technical report provides a background on the legislative context relevant to the data collection and reporting, a description of the data collection tool (Use of Force Report), an overview of the data collection, cleaning, and analytic methodologies, and a review of the scope and limitations of the data collected, and descriptive analyses.

Analyses were done using the data extracted from the provincially mandated Use of Force Reports for incidents that occurred between January 1, 2020 and December 31, 2020. The results from 2021 and 2022 do not differ substantially from the 2020 results. As such, only the interpretations for the 2020 dataset are presented in detail in this technical report. A table comparing the results of analyses across all three years is available on the Ontario Data Catalogue as are the datasets created for all three years.

Due to limitations in the data, only general thematic analyses are possible, and any conclusions are preliminary. Important information about the context of the force incident is not captured on the Use of Force Report and, consequently, is not included in analyses. The Ministry of the Solicitor General has taken steps to improve the Use of Force Report to correct many of these data limitations.

Police in Ontario respond to approximately four million calls for service each year. Based on these figures, over 99.8 per cent of these calls were resolved without the use of force. Of the 1,092 Team Reports in the 2020 dataset, 91 per cent (991) were for a tactical/hostage rescue, or emergency response team. The most common reason reported for the use of force (85 per cent, 5,926) was to Protect Self (which refers to the reporting officer). The second most common reason reported was to Effect Arrest (79 per cent, 5,512). In nearly two thirds of Use of Force Reports (63 per cent), the officer listed Protect Public[1] as a reason force was used. In addition, reporting officers listed protecting other officers (five per cent, 341), protecting individuals on whom force was used (two per cent, 103) or other reasons[2] (one per cent, 39) for the type of force reason.

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[1] "Public" includes victims, witnesses, bystanders, and the general public.
[2] Other includes entries such as "preventing the destruction of evidence", "remove from cell", "safety concerns", "holding baseball bat", "gain compliance", etc. There were two "Accidental" reason for force selected, these were recoded into "Other" for the purpose of this analysis.

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Section 1: Overview of Use of Force in Ontario

1.1 Legislative Background

1.1.1 Ontario's Anti-Racism Act, 2017

The Government of Ontario is addressing racial inequities in its policies, decisions, programs, and services. An important aspect of identifying and addressing racial inequity is the collection and analysis of robust, standardized, and comprehensive race-based data that can be used to inform actions and monitor progress towards advancing racial equity.

The *Anti-Racism Act, 2017* (*ARA*) provides the province with a statutory framework that includes the legislative authority to mandate the collection of race and identity-based data, regulatory requirements relating to collection of race-based data, and the rules and standards to follow when collecting, analyzing, and reporting on this data.

Ontario Regulation 267/18[3] under the *ARA* (referred to as the *ARA* Regulation 267/18 for the remainder of the technical report), sets out the information that various Public Sector Organizations (PSOs) are required or authorized to collect, as well as the date on which they may or must begin collecting the information.

1.1.2 Ontario's Anti-Racism Data Standards (ARDS)

Section 6 of the *ARA* requires the Minister Responsible for Anti-Racism to establish data standards to help enable PSOs to meet the requirements of the *ARA.* Ontario's Anti-Racism Data Standards (ARDS)[4] are a tool to guide PSOs in identifying and monitoring racial disparities and disproportionalities. The ARDS are intended to ensure that PSOs generate reliable information to support evidence-based decision-making and promote public accountability.

The ARDS include 43 standards that govern how PSOs manage the information, including the personal information, that they are required or authorized to collect under the *ARA.*[5] The ARDS speak to the collection and use of personal information; de-identification and disclosure of information; the retention, security, and secure disposal of personal information; the analysis of the data collected; and the publication and reporting of a) the data collected, and b) the results of the analyses conducted.

ARDS 36 (Public Reporting of Results) requires PSOs to produce regular and timely reporting on the results of analyses, descriptions of benchmarks and/or reference

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[3] Link to O. Reg. 267/18: GENERAL
[4] Link to the Data Standards for the Identification and Monitoring of Systemic Racism
[5] Not all 43 ARDS apply to every regulated collection data, for example, there are six ARDS on the collection of Participant Observer Information (POI) that only apply if the PSO is collecting POI

groups used in the analyses, thresholds to identify notable differences between groups, and information about how the data were collected and the data quality (the accuracy, validity, and completeness of the data collected).

This technical report is presented for the purpose of complying with ARDS 36 to the greatest extent possible given the data available to the Ministry of the Solicitor General. The technical report includes descriptive analyses of data from police Use of Force Reports received by the Ministry of the Solicitor General and an assessment of the quality and limits of the existing data, including limitations on the use of benchmarks, reference groups, and thresholds.

1.1.3 Use of Force Data Collection

Item 6 of the table in the *ARA* Regulation 267/18 requires the Ministry of the Solicitor General to collect and analyze, "as provided by police forces, the race of individuals as perceived by members of the police forces in respect of whom a use of force report is prepared by a member of the police force and any other information set out in the report, other than the name of the individual, that the police force is legally required to provide to the Ministry of the Solicitor General."[6]

To collect the data required by Item 6, in 2019 the Ministry of the Solicitor General modernized the original Use of Force Report[7] that had been in place since 1992, to include a new data field capturing a police service member's perception of the race of the person(s) on whom the member used force and a report was required to be completed. Ontario police services began using this updated Use of Force Report on January 1, 2020. Training was also provided to police service members via a guidebook and online materials.

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[6] See the table in s. 2 of the Regulation: O. Reg. 267/18: GENERAL (ontario.ca)
[7] See Appendix A.

1.2 Use of Force Background

Police officers face situations where they may use force during their duties to ensure their own safety and that of the community.

The parameters governing the use of force by police officers are contained in the *Criminal Code*, other federal and provincial legislation and regulations, the common law, and the *Charter of Rights and Freedoms*. The broad principles governing the use of force by police are summarized in Appendix B. In Ontario, the provincial statute governing police use of force is the Ontario *Police Services Act*[8] and its Equipment and Use of Force Regulation (R.R.O. 1990, Regulation 926).[9] The Ministry of the Solicitor General also maintains a Use of Force Guideline for all police services governed by the *Police Services Act* (PSA) to provide additional guidance regarding police use of force training, the use of firearms and other weapons, and the reporting of officers' use of force.

1.2.1 Ontario's Use of Force Model

Ontario has a standard Use of Force Model that shows response options that may be appropriate based on the situation in question. The model is based on the National Use of Force Framework.

The model reflects the process by which a police officer assesses a situation, plans, and takes action to ensure public safety, which may include using force. As interactions are fluid, officers continuously assess the situation to choose the most reasonable option according to the situation and the behaviour of the persons involved. Officers consider whether the individual is being cooperative; passively or actively resistant; assaultive; or behaving in a way that poses a risk of serious bodily harm or death to the officers or members of the public. The model is not prescriptive, does not dictate decisions or actions of a police officer, and does not change the applicable law.

The officer assesses the situation, the person's behaviour, and other factors to decide if force is necessary and, if so, which force option to use. At the lowest risk/threat level, the presence of an officer or officers may serve to adequately control a situation and change the behaviour of the person(s) involved without using force. At the highest risk/threat level, an officer may choose to use lethal force when there is risk of serious bodily harm or death that cannot be resolved with any other non-force or force option.

De-escalation may lead to a lower amount of force being used. It may even prevent the need for force. Increased force may be appropriate when the situation becomes more

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[8] Link to Police Services Act, R.S.O. 1990, c. P.15
[9] Link to R.R.O. 1990, Reg. 926: EQUIPMENT AND USE OF FORCE

serious and the threat increases to members of the public, officers, or the persons involved. Employing de-escalation strategies to achieve peaceful resolutions is a fundamental goal during police interactions with the public.

The Use of Force Model in use during 2020-2022 was last revised in 2004. In 2023, the Ontario Use of Force model was replaced with the Ontario Public Police Interactions Training Aid.

1.2.2 Officer Training and Certification

In Ontario, use of force and firearms training for officers is mandated in the Equipment and Use of Force Regulation (R.R.O. 1990, Regulation 926) under the PSA. A member of a police service must not use force on another person unless the member has successfully completed training on use of force (s. 14.2(1)).

All new Ontario police recruits complete foundational training that includes training on de-escalation and the use of force. In addition, police officers are required to take annual use of force training, which is provided by their police service by qualified instructors who are accredited through the Ontario Police College.[10] This training must include legal requirements, the exercise of judgement, safety, theories relating to the use of force, and practical proficiency. This content is typically delivered via classroom presentation and scenario-based training activities.

Also, officers must successfully complete a firearms training course before they are allowed to carry a firearm. Officers must complete training every twelve months to continue to carry a firearm (s.14.2(2)).[11]

Additionally, the Ministry of the Solicitor General's Use of Force Guideline recommends specific training on communication, physical control, impact weapons (e.g., baton), aerosol weapons (e.g., pepper spray), conducted energy weapons (CEWs), and firearms. This ongoing training is to ensure that an officer can assess a situation quickly to determine the appropriate response and to evaluate whether a physical method is required to subdue an individual, or to prevent injury to the individual, the officer, or a member of the public.

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[10] Link to information on the Ontario website about The Ontario Police College
[11] Chiefs of Police can grant limited extensions to complete the mandatory training (s.14.3(2) and 14.3(3).

1.3 2020-2022 Use of Force Report

The Ontario Use of Force Report is an administrative form first implemented in 1992 through the Equipment and Use of Force Regulation (R.R.O. 1990, Regulation 926) under the *Police Services Act.* The purpose of the Use of Force Report was to collect data on use of force incidents to inform police policy and training.

The Use of Force Report captures information about police use of force incidents. This includes the type of force used, whether any other individual was perceived to be carrying a weapon, and the reason force was applied.[12]

Data limitations outlined in the next section of this technical report apply to all data collected using this version of the Use of Force Report. The Ministry of the Solicitor General modernized the Use of Force Report and mandated the use of an updated Use of Force Report beginning January 1, 2023 to address several of the data limitations noted in this technical report.

1.3.1 When Force Must be Reported

The Ministry of the Solicitor General analyzed data from Use of Force Reports collected under the Equipment and Use of Force Regulation (R.R.O. 1990, Regulation 26) for incidents believed to have taken place between January 1, 2020, and December 31, 2022.[13] During this three-year period, members of police services were required under s. 14.5(1) to complete a Use of Force Report whenever a police service member:[14]

- drew a handgun in the presence of a member of the public[15]
- pointed a firearm at a person
- discharged a firearm
- used a weapon other than a firearm on another person
- used force on another person that resulted in an injury requiring medical attention

The Equipment and Use of Force Regulation (R.R.O. 1990, Regulation 926) has changed since 2020. For instance, officers in 2020 were not required to report drawing and displaying a conducted energy weapon (CEW) (i.e., TASER) with the intention of achieving compliance. This is required under the regulation that came into force on

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[12] See Appendix A for a copy of the Use of Force Report in use from 2020 to 2022.

[13] See limitations section of this technical report for details on the ministry's inability to confirm when the use of force incidents actually occurred.

[14] When a Use of Force Report is required to be submitted under this regulation, these are referred to as "provincially reportable" uses of force.

[15] This requirement does not apply if the only people present were on-duty police service members.

January 1, 2023. This Technical Report analyses data collected under the Equipment and Use of Force Regulation in effect in 2020.

1.3.2 Addition of Race-Based Data Collection

To meet the requirements of Item 6 of *ARA* Regulation 267/18, the Use of Force Report was revised effective January 1, 2020, to capture the police service member's perception of the race of the individual on whom force was applied and a Report was required to be completed.

The question added to the Use of Force Report was:

What race category best describes the subject(s)? (select only one per subject)[16]

1. *Black*
2. *East/Southeast Asian*
3. *Indigenous (First Nations, Métis, Inuit)*
4. *Latino*
5. *Middle Eastern*
6. *South Asian*
7. *White*

In accordance with Anti-Racism Data Standard 40, police service members are required to select which of the seven racial categories best describes the individual. Collection of race-based data in this manner, collecting one person's perception of the race of another person, is an example of Participant Observer Information (POI). [17]

This question is mandatory and reporting officers can only select one of the race categories provided. Under the ARDS, it is not permitted to include on the Report a "don't know," "prefer not to answer," or open text response option. If a person is perceived to be of mixed race, the officer must choose the race category that, in their view, the person most resembles. Officers are instructed not to ask the individual to provide their self-identified race.

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[16] The language of the question on the Use of Force Report deviates slightly from the language in ARDS 40, which is "What race category best describes this individual" (select only one)." This small change was made to use language consistent with Use of Force Report (subject vs individual) and because respondents can report perceived race for up to three individuals, however, only one race category can be chosen per individual as per the ARDS.

[17] See Standards 38 to 43 of ARDS for more information on POI.

1.3.3 Reporting Police Services

As of January 1, 2020, all municipal police services and the Ontario Provincial Police were required to submit Use of Force Reports to the Ministry of the Solicitor General pursuant to the Solicitor General's authority to request such information under the Equipment and Use of Force Regulation (s. 14.5 (4)). Race-based data are collected pursuant to Item 6 in the *ARA* Regulation 267/18 table. First Nations police services are not required to complete or submit Use of Force Reports to the Ministry of the Solicitor General because they are not governed under the *PSA*.

Completed Use of Force Reports are provided to the Ministry of the Solicitor General by police services through a submission process administered by the Ministry's Business Intelligence and Insights Branch.

In 2020, Ontario had 54 police services (44 municipal police services, nine First Nations police services, and one provincial police service). In 2021 and 2022, Ontario had 53 police services (43 municipal police services, nine First Nations police service, and one provincial police service).

Section 2: Data Limitations

2.1. Use of Administrative Data for Research

The data analyzed in this technical report are derived from Use of Force Reports that were designed and implemented for administrative purposes. Administrative data is data that organizations use to conduct their regular operations.

Although administrative data is frequently used for research, there are often unique challenges related to the design, structure, and content of the information in datasets derived from administrative systems.[18] Unlike data specifically collected for research purposes, administrative datasets may not include all the information needed to answer research questions of interest or to develop or test theory. In addition, administrative datasets often require substantially more data management for cleaning, organizing, restructuring, and recoding to prepare the data for use in research compared to research datasets. A great deal of time and effort may be required to ensure that analysts understand how the information was generated and determine the appropriate uses for the data and its applicability for answering research questions of interest.

When using administrative data for research purposes, it is often necessary to link different administrative datasets together to create a comprehensive research dataset. This adds to the complexity and opens new opportunities for more fulsome and meaningful analysis. For police use of force analysis, individual police services can link data from Use of Force Reports to information in their Records Management Systems (RMS). The Ministry of the Solicitor General did not have access to information in police service RMS, meaning that some research questions of interest cannot be explored by the Ministry.

One benefit of administrative data is that it can be an efficient data collection method that often provides data about all – or nearly all – relevant individuals or events. In contrast, social science research typically involves collecting data from a sample of people and then generalizing the results from the sample to a larger population. This generalization involves the use of inferential statistics to assess whether findings in the sample data are generalizable to the population of interest (e.g., whether results of an opinion poll conducted with 1,500 Ontarians can be used to make inferences about the opinions of all Ontarians). This inferential step is typically not necessary with administrative data because it usually includes information about the whole population. This is the case with the Use of Force Report data. Analysis was conducted on all Use of Force Reports, not a sampling, therefore, inferential analysis is not required for this technical report's analyses.

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[18] These challenges are discussed in greater detail by Connelly, Playford, Gayle, and Dibben (2016): The role of administrative data in the big data revolution in social science research - ScienceDirect

This is the first time the Ministry of the Solicitor General has analyzed data from Use of Force Reports with a research lens and for the purposes of identifying racial disparities or disproportionalities, if any. This opportunity enabled the Ministry of the Solicitor General to examine and assess the data quality, structure, and content of data collected on the administrative Use of Force Report for use in this type of analysis and research. Several limitations were noted owing to the administrative nature of the data and are outlined more fully in this section of the report. The Ministry of the Solicitor General has since taken steps to modernize the content, design, and structure of the administrative Use of Force Report to improve its data's applicability for use in research going forward.

2.2 Lack of Standardization

One challenge with using data collected from an administrative form, such as the Use of Force Report, is that individuals completing the form may have different understandings of what the question is asking and how to respond.

Although there is a provincial guide on how to complete the Use of Force Report, it does not necessarily provide explanations for all response options contained in the report. Individual police services may provide complementary guides and supports to reporting officers, but this is not standardized across Ontario at this time.

Also, police services often use codes and acronyms to communicate and will frequently use them in their open-text responses. These codes are not standardized across police services.

The result of this lack of provincial standardization for police codes, definitions[19] and response options is that the Ministry of the Solicitor General encounters data quality challenges and additional time requirements when combining data collected from multiple police services for analysis. This does not affect individual police services' ability to analyze their own data.

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[19] For example, the impact of a lack of standardization for call type data on ability to understand counts or trends or conduct comparisons across services or regions.

2.3 The Need for Additional Data

The purpose of these analyses, as outlined in the *ARA*, is to identify and monitor any racial disparity and disproportionality in police use of force in Ontario. The ARDS includes a set of analytical standards that provide PSOs with minimum requirements for analysis (i.e., using the data collected to calculate disproportionality or disparity indices). The Use of Force Report in use from 2020 to 2022 did not provide the Ministry of the Solicitor General with all the data required to conduct the required calculations set out in the ARDS.

The required data may have been unavailable because it was:

1. redacted prior to the Use of Force Report being submitted to the Ministry of the Solicitor General
2. derived from optional questions that had low numbers of responses
3. not collected at all on the Use of Force Report

This impacts the type and quantity of analyses that can be conducted with the data that was available to the Ministry of the Solicitor General from 2020 to 2022.

The changes made to the provincial Use of Force Report effective January 1, 2023 will enhance the Ministry's data collection and analysis capabilities in the future.

2.3.1 Redacted Fields

In 2020, important data fields on the Use of Force Report (e.g., Incident/Review Dates, Time Incident Commenced, Location Code, Incident Number, Officer Involved) were redacted prior to the Use of Force Report being submitted to the Ministry of the Solicitor General. All information in the narrative and Part B of the Use of Force Report was also redacted from report submissions. This means that important information about the factors that influenced use of force, including details about the circumstances of the event, and the behaviour of the individual and officer are omitted from the analysis.

Since the Use of Force Report was originally implemented to collect data for policy and training purposes, it includes information about the individual officers involved and their training needs. As the analysis in this technical report is not intended to be an assessment of individual officers' performance or training needs, the data about individual officers was excluded from reports submitted to the Ministry of the Solicitor General.

Redaction of information about the incident narrative, location, time, and incident number was part of a process that was implemented to mitigate concerns at the time about privacy for members of the public.

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These data redactions had an impact on data quality and further impacted the analysis capabilities of the Ministry of the Solicitor General. It prevents the Ministry from:

- Identifying and removing duplicate report submissions
- Identifying reports about the same use of force incident
- Analyzing data at the Use of Force "incident" level
- Calculating disparity or disproportionality indices
- Comparing Ministry of the Solicitor General numbers with numbers reported by individual police services
- Linking data with additional data sources
- Attributing events to particular cities or neighbourhoods
- Conducting multivariate analyses
- Conducting seasonal, trend, or spatial (e.g., neighborhood) analyses
- Empirically assessing theory-driven explanations for over- or under-representation or disparate outcomes in police use of force
- Adequately identifying the situation-specific factors – including the behaviour of the officer and the individual on whom force was used – that may explain why force was applied
- Identifying upstream or situation-specific factors that may explain any disproportionality or disparity in use of force

The effect of these redactions has led to severe limitations in how the Ministry of the Solicitor General can analyze and interpret the data collected from 2020 to 2022. A few key impacts are detailed below.

2.3.1.1 Redaction of date prevents examining trends over time or seasons

The Ministry of the Solicitor General is not able to determine when the use of force incidents described in the Use of Force Reports occurred as incident date is redacted prior to reports being submitted to the Ministry.

As reports are submitted to the Ministry of the Solicitor General after they are reviewed by a police training analyst, there is usually a time gap between when the use of force incident occurred and the Use of Force Report's submission to the Ministry. It is possible that reports for use of force incidents that occurred in one calendar year were submitted to the Ministry of the Solicitor General in the following calendar year. For instance, incidents that happened in December 2020 may be submitted to the Ministry in January 2021. Some police services may submit all their annual Use of Force Reports in one batch. Without date fields, the batch submissions may not be included in the correct reporting year. For example, if a police service submitted a small batch of their 2020 Use of Force Reports in February 2021, these may be included in the 2021 dataset. Conversely, if a large batch of 2020 Reports submitted in February 2021

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included a few 2021 Reports, these might be included in the 2020 dataset. Consequently, the provincial use of force dataset for a given calendar year may not include all use of force incidents that took place that year and may include use of force incidents from an earlier or a later year.

Without the use of force incident date or the ability to confirm in what year incidents took place, it is not possible to compare trends over time with certainty. It is not possible to know if any year over year increases or decreases seen in the Ministry of the Solicitor General's data between 2020 and 2022 are reflective of changes in the number of use of force incidents during each of those years or are the result of differences in when reports were submitted to the Ministry during those years.

In addition, without the incident date and time fields, no analysis can be done on any potential seasonality or time of day effects on police use of force.

2.3.1.2 Redaction of incident number prevents an accurate count of overall number of incidents

It is not possible to link Use of Force Reports submitted by different officers for the same use of force incident because incident numbers were redacted prior to reports being submitted to the Ministry of the Solicitor General. As one use of force incident may generate multiple Use of Force Reports, the lack of incident number prevents the Ministry of the Solicitor General from knowing how many police use of force incidents actually occurred in Ontario. This also prevents the Ministry from conducting any analyses requiring an accurate count of the number of use of force incidents, including several of the analyses required under the Anti-Racism Data Standards.

As a result, any analyses conducted are based on the number of Use of Force Reports submitted to the Ministry, not the number of police use of force incidents that actually happened.

The number of Use of Force Reports generated each year will always be higher than the actual number of use of force incidents that occurred because multiple reports are often generated from the same use of force incident. In addition, duplicate Use of Force Reports may be submitted due to system or technical issues.

Basing analyses on Use of Force Reports means a) the Ministry of the Solicitor General numbers overcount the amount of police use of force, b) they may be higher than the numbers reported by police services who can remove duplicates and link Use of Force Reports generated from the same incident and may choose to collect information on

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use of force incidents that are not provincially reportable,[20] and c) they cannot be used to measure disproportionality and other key measures of racial differences in outcomes (see later section of this technical report).

The potential scale of the problem and the effect on analysis is best illustrated using a hypothetical scenario. For example, an armed individual is barricading himself in his residence and four patrol officers and a twelve-member tactical team arrive at the residence. During the incident, the patrol officers all draw their handguns. Additionally, five tactical unit members point firearms at the individual when he exits the residence. While being apprehended, the individual becomes assaultive. Physical force is used by three team members, which results in the individual requiring medical attention.

This example could potentially result in a total of eight Use of Force Reports: four individual reports from the patrol officers who drew their handguns; one team report for the five tactical unit members who pointed firearms;[21] and three individual reports from the tactical unit members who used physical force. All eight reports would include an officer's perception of the individual's race. If, for example, each officer indicated perceiving the individual as "race A," the Ministry of the Solicitor General dataset would show eight Use of Force Reports for that police service with an individual perceived as "race A."

If this police service submits a total of 12 Reports involving individuals perceived as "race A" that year, two thirds will have been generated from this one incident. The Ministry of the Solicitor General cannot identify connections among the Use of Force Reports because of redactions. In this example, it may appear that "race A" individuals are over-represented in use of force incidents for this police service; however, the seeming over-representation would be due to this one incident that generated multiple Reports. All Report variables may be similarly affected (e.g., type of force used). These types of scenarios will influence the results of analysis. This is particularly the case in scenarios with small cell counts (e.g., police services with few Reports or police services with few Reports for people perceived as a particular racial group).

2.3.1.3 Redactions inhibit individual level analysis

Due to the availability of data solely at the Use of Force Report level for the Ministry of the Solicitor General, and no data or approximation of the number of unique individuals

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[20] Some police services require their members to complete Use of Force Reports for incidents that are not required to be reported to the ministry under provincial regulation. In these cases, police service numbers may be higher than the ministry's numbers.
[21] In some circumstances, teams can submit one Use of Force Report for the entire team. If some members of the team use additional force options, they would typically submit individual reports as well. See the analysis section about Team Reports for more detail.

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involved, it is not possible to calculate statistics at the individual level (e.g., racial disproportionality and disparity indices).

In the Ministry of the Solicitor General's dataset, it is not known how many unique incidents occurred or how many unique individuals were involved. As well, multiple reports may refer to the same or different individuals, who may be involved in single or multiple use of force incidents. Even if Use of Force Reports about the same incident are linked, it may not be clear that the officers are describing the same individuals. Finally, Use of Force Reports involving multiple individuals and multiple force types do not clarify which force type was used on which person.

For example, a police service submits five Use of Force Reports, each of which describes an incident with one individual. This could be the result of a few different scenarios:

a) five officers involved in one use of force incident with a single individual
b) five different use of force incidents with five different individuals
c) five different use of force incidents with the same individual
d) some combination of these examples

Consequently, analyses conducted at the Use of Force Report level will not be reliable. Observed differences at the report level may be larger than actual differences at the incident level. As well, there is a risk that observed differences could be an artefact of reporting practices rather than genuine differences in use of force (e.g., duplicates and multiple reports about the same individual or incident).

It is not possible for the Ministry of the Solicitor General, using current Use of Force Report data, to:

- Compute disproportionality or disparity indices, as described in the ARDS
- Compare Use of Force Report data with an appropriate benchmark population
- Conduct multivariate analyses
- Consider whether individuals or officers are involved in more than one use of force incident

ARDS 27 instructs PSOs to conduct analyses on the disaggregated race categories (i.e., primary units of analysis). In the case of police use of force, this would be analyzing the specific force applied to each individual for each use of force incident.

From 2020 to 2022, the Ministry of the Solicitor General was restricted to using the Use of Force Report as the primary unit of analysis, rather than the incident or the individual. The Ministry has taken steps to improve the Use of Force Report to correct this limitation.

2.3.1.4 Disproportionality and Disparity Indices

ARDS 29 requires organizations to compute racial disproportionality and/or disparity indices. Racial disproportionality measures the extent to which a racial group's representation in a program, service, or function is greater or lesser than that same racial group's proportional representation in the benchmark population (a within racial group comparison). Racial disparity measures group differences in outcomes by comparing the outcomes of one racial group to the outcomes of another racial group (a between racial group comparison). Both are examples of individual-level analyses.

According to ARDS 29, PSOs are to compute the indices that are most appropriate for their particular context and research question, provided that they calculate at least one of a racial disproportionality index and disparity index. Both indices are important in the context of police use of force.

Disproportionality measures if the representation of any racial groups is higher or lower in police use of force than their proportion of the benchmark population. For example, disproportionality would measure whether there was a higher or lower number of people perceived as "race A" involved in police use of force given the number of "race A" people who had encounters with police.

Disparity measures if certain racial groups experience different outcomes in police use of force compared to other racial groups. For example, disparity would measure whether people perceived as "race A" experience more severe use of force or acquire more serious injuries as a result of the use of force, compared to people perceived as "race B."

Disproportionality and disparity scores indicate where there is over or under representation. These scores do not indicate or measure bias or discrimination.

Understanding why any observed disproportionality or disparity exists requires computing causal models that include data on contextual factors that may influence or explain observed differences.

In the case of police use of force, important contextual variables include: the behaviour of the individuals involved; whether the individual was armed; whether the individual was intoxicated; the type of call police were responding to and the description they were provided; the officer's experience and training; and other individual, situational, or neighbourhood contexts. Including these contextual factors into data modeling provides an opportunity to parse out differences that are attributable to contextual factors and isolate the proportion of difference that may be attributable to other factors. Disproportionality and disparity scores tell us there is a difference but do not tell us why.

In addition, these two indices require incident and individual-level use of force data to properly calculate their numerators. They each use different reference or benchmark groups for their denominators. ARDSs 30 and 31 provide additional detail on the appropriate denominator populations. ARDS 32 requires PSOs to identify thresholds that will indicate whether the magnitude of disparity or disproportionality represents a notable difference for further investigation, monitoring, and potential action.[22] As noted in the previous section, the Ministry of the Solicitor General's dataset can only support analyses at the Use of Force Report level; individual-level analyses cannot be conducted. Therefore, this technical report does not include any quantitative indices specified in the ARDS 29[23] and includes only qualitative thematic assessments examining racial differences at the Use of Force Report level.

It is important to keep these limitations in mind because results at the Use of Force Report level will differ from the true rate of disproportionality and disparity in use of force incidents, owing to the limitations discussed. Measuring at the report level can overcount and undercount the amount of difference, depending on the outcome being examined.

For example, in the case of incidents involving multiple individuals, the Use of Force Report did not allow an officer to identify the type of force used on each individual. Report-level analyses assume all individuals involved experienced similar types of force. If that is not the case, the difference between racial groups would be undercounted. In a hypothetical example, one incident included three individuals perceived as "race A," all of whom were struck with a baton and an empty hand. A second incident included three individuals perceived as "race B." All three were struck with an empty hand and only one was struck with a baton. Because the information about force used in the Use of Force Report would appear the same (i.e., use of empty hand strikes and an impact weapon in a report with three individuals), the different force used on individuals perceived as "race A" would not be identified.

In this example, report-level analyses would undercount the degree of racial disparity in use of force involving people perceived as "race A."

As another example, report-level analyses will overcount racial differences if there are differences in the number of Use of Force Reports, by perceived race, for one use of force incident. If use of force incidents involving some racial groups tend to involve more

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[22] ARDS 32 is applied after ARDS 23, 30, and 31 have been met.
[23] ARDS 31 requires PSOs to choose an appropriate reference group that allows for meaningful interpretations of patterns and trends. The lack of individual data precludes using a reference population for analyses. This is described in the next section.

officers -- and therefore lead to more reports -- compared to incidents involving other racial groups, it may appear that there is a racial disproportionality when there is not.[24]

Analyses using individual-level data would allow more accurate measures in both the size and direction of any racial differences in use of force. This requires data not available to the Ministry of the Solicitor General from 2020 to 2022. As noted elsewhere in the report, there are opportunities to enhance the Use of Force Report or use other sources to collect data needed to improve the Ministry's ability to compute quantitative disproportionality and disparity indices in future years.

2.3.1.5 Lack of appropriate benchmark population to calculate disproportionality in use of force

Measuring disproportionality requires a benchmark population to compare observed data against. ARDS 30 requires PSOs to choose the benchmark[25] population appropriate to their sector and research context for disproportionality analyses. The benchmark must be the most relevant population for the outcome of interest from the best available datasets and must be useful for interpreting year-over-year trends.

In research, a "population" is the group *that is of interest* or about which the research intends to draw conclusions. This is different from the colloquial meaning of "population," which usually refers to the people living in a geographical region. For example, the appropriate population for a study on the experiences of Canadian cancer patients would be people in Canada diagnosed with cancer, rather than everyone living in Canada. For this report, the most relevant benchmark population would be individuals who interact with police. The reasons for this are explained in this section.

The appropriate research benchmark population is determined by the questions the research is intending to answer. For this technical report, the principal research question is whether there are differences in police use of force depending on the perceived race of the individual on whom force was used. More specific research questions[26] flow from this broad area of interest, which require their own particular

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[24] However, this may be in indication of racial disparity in the type or number of applications of force by perceived race of the individuals.

[25] ARDS provides the following definition of a benchmark: "A benchmark is a point of reference, or standard, against which things can be compared, assessed, or measured."

[26] Fully understanding differences related to perceived race which may emerge in use of force requires multiple avenues of inquiry. Each would involve different outcomes and analytic approaches, including multiple benchmarking strategies. For example, a research question could be whether any racial differences in use of force are due to members of some racial groups having more contact with police, differences in the use of force events themselves, or some combination of the two. Answering this question would require benchmark populations of residents and of police encounters. Multivariate

benchmark populations. For disproportionality, the research question is whether people perceived to be of a particular racial group are represented disproportionately in use of force incidents.

Measuring this disproportionality requires comparing the data associated to a particular racial group from the Use of Force Reports to that same racial group in a benchmark population.

Selecting the most appropriate benchmark population is crucial. The benchmark population chosen will affect whether disproportionality is detected at all, and the size and direction of any racial disproportionality identified.

For example, if analysis indicates that 10 per cent of Use of Force Reports involved people perceived as Indigenous, the interpretation of the finding will be different depending on whether Indigenous people are five per cent of the benchmark population (indicating overrepresentation) or 25 per cent of the benchmark population (indicating underrepresentation).

It is relatively common for researchers to use resident population data from the Census as a benchmark population for calculating disproportionalities, including in policing research.[27] Although this approach is frequently used and provides valuable insights into the disproportionate representation of racial groups in police interactions, including in Ontario,[28] there are considerable drawbacks that make this resident benchmark population less suitable for measuring disproportionality in the specific event of police use of force. Using resident population to calculate disproportionality in police use of force requires that all residents in an area be equally likely to encounter police. There is extensive literature from Ontario and other jurisdictions showing that members of some racial groups have a significantly higher probability of contact with police than members of other racial groups.[29] This applies to self-identified and perceived race. The result of

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modeling would identify which factors are significantly associated with the relevant outcome and the relative size of any significant effects. This type of analysis would support a better understanding of use of force to inform policy and training.

[27] The ARDS list administrative datasets (e.g., police operational datasets) and Statistics Canada population datasets as two possible sources of data for constructing benchmark populations while noting that these are examples only and areas should choose the data sources and benchmark populations that best measure disproportionality for their research outcome or event.

[28] Wortley, S. (2006). *Police use of force in Ontario: An examination of data from the special investigations unit. Final report to the African Canadian Legal Clinic for submission to the Ipperwash Inquiry. Link to POLICE USE OF FORCE IN ONTARIO: An Examination of Data from the Special Investigations Unit*

[29] E.g., Foster, L., Jacobs, L., & Siu, B. (2016). *Race Data and Traffic Stops in Ottawa, 2013-2015: A Report on Ottawa and the Police Districts.* Ottawa: Report prepared for the Ottawa Police Services Board and the Ottawa Police Service.

these drawbacks is a substantial concern with the ability of resident population to provide an accurate and reliable measure of disproportionality in police use of force.

One key drawback is that using resident population as the benchmark to measure disproportionality does not distinguish between racial disproportionality in police use of force specifically and racial disproportionality resulting from high frequency-policing generally. This distinction is important if the intent is to understand if any disproportionalities seen in police use of force are related to the use of force incidents themselves, rather than broader factors related to high frequency-policing. As a result, using resident population as a benchmark, can overcount disproportionality in use of force for some racial groups (e.g., high-police contact groups) and undercount or erroneously indicate no disproportionality for other racial groups (e.g., low-police contact groups).

As noted earlier, the key research question for this technical report is identifying differences in police use of force across perceived racial groups. Essentially, once police encounter an individual, does force differ depending on the perceived race of the person(s), after controlling for all relevant event-specific factors (e.g., behaviour, whether the individual was previously known to police, whether they were under the influence of alcohol or drugs, etc.)? This question cannot be adequately addressed using a resident benchmark population.

The benchmark most relevant for exploring disproportionality attributable specifically to police use of force is the population of people who have experienced police contact or enforcement.[30, 31] An "encounters" dataset with race-based information would enable the use of multiple benchmarks in analysis. This would allow analysis to understand potential disproportionalities in police contact generally and use of force specifically, rather than confounding disproportionality in use of force and contact with police. At this

Wortley, S. & Jung, M. (2020). *Racial disparity in arrests and charges: An analysis of arrest and charge data from the Toronto Police Service.* Report submitted to the Ontario Human Rights Commission. Racial Disparity in Arrests and Charges (ohrc.on.ca)

Wortley, S., Laniyonu, A., & Laming, E. (2023). *Use of force by the Toronto Police Service: Final report.* Submitted to the Ontario Human Rights Commission. Link to Use of force by the Toronto Police Service, Final Report

[30] Conceptually, this is similar to an analysis of a service or program using those who are eligible as the benchmark population, rather than all individuals in the catchment area.

[31] Operational definitions for "contact" and "enforcement" are needed. Individuals may come into contact with police for any number of reasons, either through calls to police or officer-initiated activities. For example, the Toronto Police Service chose to use an enforcement population and included individuals who "are arrested (for any reason), receive a ticket for serious provincial offences, receive a caution or summons, and apprehensions, or arrest diversions. It also includes those who are recorded as persons in crisis, 'suspects' and 'subjects,' and youth equivalents. This excludes parking tickets and routine traffic or pedestrian tickets." (p. 23 of the Toronto Police's 2020 Use of Force Technical Report)

time, the Ministry of the Solicitor General does not have access to data that could be used to construct a police enforcement benchmark population.

This lack of individual-level data introduces additional difficulties for the Ministry of the Solicitor General if multiple police services are involved in a single use of force event. For example, if Toronto Police Service officers are pursuing a single individual from Toronto into Mississauga, they may be joined by Peel Regional Police. If officers from both services are involved in a use of force incident, it is reported by both services and would be compared to both police service encounters dataset (if one existed) or both communities' populations if using residential benchmark populations to calculate disproportionality.

This lack of location data combined with a lack of individual data in the Ministry of the Solicitor General's dataset prevents comparisons with resident benchmark populations in two additional ways.

First, it is not clear where the use of force incidents occurred. This means that it is not possible to reliably compare use of force incident data with the population who live nearby. The racial breakdown of residents differs substantially across areas of the province. Using an Ontario-wide benchmark population could give an inaccurate presentation of disproportionalities. For example, if one area of the province has people perceived as "race A" with a higher proportional representation in use of force, and another area has lower proportional representation of "race A," these two results could neutralize each other, and the provincewide comparison would then show no disproportionality.[32]

The absence of location data is particularly relevant to reports from the Ontario Provincial Police (OPP), who are responsible for law enforcement activities across large areas of the province, but not all of the province (they generally do not police Ontario's large urban and more racially diverse areas[33]). The 2020 to 2022 datasets do not include the use of force incident location or information about the OPP region or detachment that generated the Use of Force Report. The result is that the only benchmark population that could be used is all Ontario residents. However, the racial makeup of areas policed by the OPP tend to have higher populations of people who self-identify as White and as Indigenous than the overall province. Consequently, a provincewide comparison of OPP use of force incidents could result in a report of higher disproportionality than actually exists, a false positive and report of disproportionality

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[32] Conceptually, this is similar to heterogeneous subgroups in experimental research.
[33] While the OPP does not police Ontario's large urban centres, they do police the provincial highways that travel through these large urban centres and thus may have use of force incidents occurring in these municipalities.

where none exists, or even a false negative where a genuine disproportionality is not identified.

Another example of a challenge of the lack of location data is that it results in use of force incidents that occurred in one community to be compared to the population of another community. For example, specialized teams from large urban communities are often called in to assist another service with high-risk situations. If a large demonstration is occurring in downtown Toronto, the Toronto Police Service may request assistance from Halton Regional Police Public Order Team to assist in managing the large crowds. If an officer from Halton Regional Police uses force, that use of force is counted as part of the Halton Police Use of Force Reports. Using the residents of Halton Region as the benchmark population for use of force incidents that occurred in Toronto would lead to inaccurate racial disproportionality calculations and invalid interpretations. In this example, racial disproportionality may be overcounted in Halton and undercounted in Toronto due to comparison with the wrong resident benchmark population for these incidents.

Second, it is not known whether the event involved residents of the community. Using resident population cannot account for individuals who live in one community but spend time in other areas. For example, individuals may commute from one area to another for work; may stay in or pass-through areas on vacation[34]; may be apprehended along provincial highway corridors;[35] or may be engaging in criminal activity or hiding in a location far away from their primary residence. Comparing use of force on non-residents to a resident benchmark population to measure disproportionalities can result in both false positives (saying there is disproportionality when there is not) and false negatives (saying there is no disproportionality when in fact there is disproportionality).[36]

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[34] There are rural Ontario towns that experience a large influx of non-residents during the summer season. In that case, the Census population of the town's year-round residents does not represent the people present during the summer. If most use of force events occurred during the summer season and involved non-residents, using the Census population of year-round residents as the benchmark population would lead to an inaccurate measure of disproportionality.

[35] This is particularly relevant for investigations of drug and human trafficking, vehicle theft rings, and organized crime. The police interaction along highways that included use of force may take place hundreds or even thousands of kilometres away from where individuals live or work.

[36] In some use of force-related research, the research question may be best examined using resident population as the benchmark and comparing a non-resident's race to the racial makeup of the surrounding community. Research focused on exploring race-out-of-place theory would require both benchmarks. Comparisons between the individuals involved in use of force events – residents and non-residents – to the racial breakdown of the community in which the event took place can be used to test for race-out-of-place theories of systemic discrimination. Again, it is vital to select the most appropriate benchmark population to answer the specific research questions of interest.

In the future, collecting incident- and individual-level data, including a person's community of residence, and incident location data, would help address these community attribution issues specific to the Ministry of the Solicitor General's data.

As a result of the data limitations described and the lack of a proper benchmark population to address the specific research question of disproportionalities in use of force, this technical report does not include calculations of quantitative disproportionality indices as outlined in the ARDS. However, general qualitative themes are presented, with discussion of the cautions required in their interpretations. It must be noted that the aforementioned limitations mean that any differences reported in this technical report or found using the Ministry of the Solicitor General's dataset could be due to differences in police contact, rather than differences in use of force specifically, and may be higher than, lower than, or masking actual disproportionalities in police use of force.

2.3.2 Optional Fields

Of the questions collected by the Ministry of the Solicitor General on the Use of Force Report, 10 are optional. Response rates for these questions were too low to support analyses. It is not clear whether report respondents did not provide information because it was optional or because the question was not applicable (e.g., the questions about whether individuals sustained injuries or required medical attention). It is also possible that there are systematic differences between incidents where the optional information was provided in the Use of Force Report and incidents where it was left blank. If so, these systematic reporting differences would affect any analyses using these data variables.

Thus, data from optional questions were not included in any analyses. With adequate data, some of these optional questions could potentially provide important insight into disparities. For example, questions about the nature of injuries and whether persons required medical attention were optional on this Use of Force Report. These data could have been used to examine whether there are racial disparities in the proportion of people who are injured and the severity of their injuries.

2.3.3 Data Not Collected in the Use of Force Report

There are several data variables that were not collected on the Use of Force Report that, if collected, could have supported a more detailed, comprehensive race-based analysis. Broadly, these fit into three categories:

- Sociodemographic and other information about the persons on whom force was used. This would include, for example, whether the individual on whom force was used was previously known to police or had organized crime affiliations.
- Officer sociodemographic information.

- Incident contextual information (for example, additional information on the behaviour of the officer and the individual on whom force was used, such as whether the individual was perceived to be intoxicated, and other qualitative aspects of their behaviour that may have influenced use of force).

The absence of this information limits the scope of the analyses that can be done with the current dataset. Examples are detailed below.

2.3.3.1 Data not collected prevents intersectional race analysis

Intersectionality recognizes the ways in which people's perceptions and experiences may vary depending on their additional overlapping or intersecting social identities. An intersectional analysis enables a better understanding of the impacts of any one systemic barrier by considering how that barrier may be interacting with other related factors.[37] For instance, an intersectional analysis could explore whether any differences across race are different for men and women or for different age groups.

ARDS 12 identifies many sociodemographic variables that PSOs may be required or authorized to collect to better understand racial disparity and disproportionality:[38]

- Age
- Sex
- Education
- Geospatial information, such as postal code for place of residence or place of work
- Socio-economic information, such as educational level, annual income, employment status, occupation, or housing status
- Citizenship
- Immigration status
- Gender identity and gender expression
- Sexual orientation
- Place of birth
- Languages
- Marital Status
- Family status
- (Dis)abilities

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[37] Anti-Racism Data Standards Glossary
[38] These variables are in addition to collecting data on a person's race, religion, Indigenous identity, and ethic origin which are covered under other Anti-Racism Data Standards

The Use of Force Report used from 2020 to 2022 did not collect information on individuals' perceived age, gender, or other identity-based indicators other than perceived race (outside of perceived race). Location data was captured on the Report but was redacted before being sent to the Ministry of the Solicitor General.

Although the analyses in this technical report include perceived race, it may be the case that within a racial category, outcomes differ for individuals of different ages, gender identities, or due to other social factors. The 2020-2022 data do not allow any intersectional analyses, or any analyses that includes sociodemographic factors other than perceived race.

Including more comprehensive sociodemographic information about the individuals involved would enable intersectional analyses and could permit a deeper understanding of the systemic factors that may influence police use of force and its outcomes.

2.3.3.2 Data not collected prevents understanding how officers' experiences may affect their decisions

Sociodemographic and background information about the officers involved in use of force incidents could be useful for deriving models of police behaviour. For example, an officer's employment history could influence their decision-making in a use of force incident. An officer's educational background might influence their behaviour. Comparisons between the level of education achieved or the type of degree earned (e.g., social science or social work compared to physical science) may reveal factors associated with police use of force.

Collecting data on officer gender, race, and age would permit exploration of whether there are interaction effects between officer demographics and demographics of individuals on whom force was used. In other words, is an officer's decision-making affected by whether the individual is a member of the same or another group.[39]

2.3.3.3 Data not collected prevents an exploration of incident context variables that may influence use of force

The Use of Force Reports used from 2020 to 2022 collected limited information about the use of force incident. As a result, it is not possible to fully understand the events during the use of force incident and any contextual factors that may influence the frequency or outcomes of the use of force.

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[39] In social science, there is a substantial literature showing that humans categorize others as part of their own in-group or an out-group. In-group members are generally favoured over out-group members. For example, see Capozza & Brown's (2000) book Social Identity Processes: Trends in Theory and Research.

For example, the Report does not include structured options to collect information on an individual's behaviour or demeanor during the incident. Individuals who are actively resistant or assaultive will likely engender a different response from officers than individuals who are passively resistant or cooperative.

In addition, there is no option to select whether individuals appeared to be experiencing mental health distress or intoxication from drugs or alcohol. This is an important issue in police use of force.[40]

Individuals who are intoxicated or experiencing a mental health crisis may behave in unexpected ways. This unexpected behaviour may be actively resistant or threatening or be interpreted as such by officers.[41] The individuals may not be able to follow verbal commands or they may respond to verbal commands in unanticipated ways. For example, an individual hearing voices during an episode of schizophrenia or someone experiencing a panic attack may not respond to shouted commands as police intend. These would include commands to drop weapons, stop advancing towards officers, and others. Particularly when several officers are shouting commands. Collecting additional incident contextual information would permit a better understanding of how officers respond to varying situations. It would also permit intersectional analysis that include variables such as race, impairment, and mental health to better understand systemic factors that may increase a person's likelihood of experiencing police use of force.[42]

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[40] For example, see
Iacobucci, F. (2014). *Police Encounters with People in Crisis*. Link to Report; Encounters with People in Crisis
Brink, J., Livingston, J., Desmarais, S., Greaves, C., Maxwell, V., Michalak, E., Parent, R., Verdun-Jones, S., & Weaver, C. (2011). *A study of how people with mental illness perceive and interact with the police.* Mental Health Commission of Canada. Link to Law_How_People_with_Mental_Illness_Perceive_Interact_Police_Study_ENG_1_0_1.pdf
McNeilly, G. (2017). *Police interactions with people in crisis and use of force: OIPRD systemic review interim report.* Police Interactions with People in Crisis and Use of Force (oiprd.on.ca)
[41] Although there is some evidence that specific mental health concerns may be correlated with violence (e.g., an individual with schizophrenia during a psychotic episode), there is not evidence that people with mental health concerns are more violent overall than other members of the community. For example, see Iacobucci, F. (2014). *Police Encounters with People in Crisis*. Link to report: Police Encounters With People in Crisis.pdf
[42] For example, Wortley, S., Laniyonu. A., & Laming, E. (2023). *Use of force by the Toronto Police Service: Final report.* Submitted to the Ontario Human Rights Commission.

2.4 Report Structure impacts on Data Quality

2.4.1 Multiple Open-Text Responses

The Use of Force Report used from 2020 to 2022 had seventeen open-text variables. Although open-text responses can be a rich source of qualitative data, the unstructured nature of responses to open-text questions can also contribute to poor data quality, incompleteness, and non-standardized data collection. As such, the usability of some of these variables may be limited.

All open-text responses must be cleaned and coded into categories prior to use in quantitative analysis. The coding of open-text responses is somewhat subjective and based on the judgement of analysts and interpretations of relevant legislation and accompanying regulations and standards (e.g., *Police Services Act*, *Criminal Code*, *Anti-Racism Act, 2017*, Anti-Racism Data Standards).

This recoding process significantly increases the time and effort required to clean and validate data. In some cases, useful details and contextual information were identified and analyzed from several of the open-text responses. In other cases, the data quality of open-text variables was too low to support analysis. Future enhancements to the Use of Force Report could potentially involve converting some of these open-text questions to structured, close-ended questions to enhance data quality and reduce the time needed to clean and validate the data before it can be used in analysis.

2.4.2 Form Design

The Use of Force Report included few built-in data quality checks (e.g., front-end data validation checks). These data entry features can guide respondents when entering data and improve data quality. They can prevent or flag respondents from entering a response that is invalid for a particular question or that contradicts their response to a previous question.

For example, a Report may have indicated that a firearm was discharged, but also indicated that no bullets were fired. It is not possible for both responses to be accurate, and it is often difficult or impossible to determine which is correct solely based on the information contained in the Use of Force Report.

For these analyses, when logical inconsistencies or out of range values were encountered (e.g., an officer enters they have 100 years of service), these were corrected when possible.[43] Otherwise, the value was recoded as missing for that

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[43] This included reaching out to the contributing police service to confirm information and cross-checking against lists of acronyms (e.g., ERT means Emergency Response Team).

question. Future design enhancements could potentially include additional front-end validation checks to guide users entering data, decrease data entry errors, and improve data quality.

2.4.3 Reports with Multiple Individuals on whom Force was Used

A Use of Force Report may be submitted for an incident where there are multiple persons on whom force was used. The Use of Force Report used from 2020 to 2022 allowed officers to indicate the perceived race for up to three persons. This limitation precludes precise racial analysis on any reports with more than three individuals involved. In addition, for reports involving multiple individuals and types of force, it is not possible to identify which type of force was used on which individual.

Section 3: Use of Force Dataset

3.1 The 2020-2022 Provincial Use of Force Datasets

The Use of Force Report was an Adobe Acrobat Portable Document Format (PDF) fillable form used by most police services[44] to record information related to provincially reportable use of force incidents.[45] These forms were then emailed to the Ministry of the Solicitor General through a secure file transfer process.

The Ministry extracted data from these forms to create datasets by reporting based on calendar year.[46] The data in these datasets was then cleaned, reorganized, restructured, and recoded as required to create datasets usable for analyses.

This technical report uses the analyses conducted on the data from the 2020 dataset to illustrate the steps followed to analyze the data. This includes a description of how each data variable was defined and coded. Information on data quality that may limit the variable's use in analytics or affect interpretations of results using the variable. As well as frequency distributions of the variables used in the analyses.

The same methods were followed to create the 2021 and 2022 datasets. The datasets created for all three years of analysis are available on the Ontario Data Catalogue.

No substantive differences were found between results from the 2020 to 2022 datasets (in addition see the limitations section of this report for concerns with comparing results year over year). As such, only the interpretations for the 2020 dataset are presented in detail in the rest of this technical report.

The same steps were followed to clean, prepare, and analyze the data in the 2021 and 2022 datasets. A table comparing the results of all analyses across all three datasets is available on the Ontario Data Catalogue.

3.1.1 Out of Scope Reports

3.1.1.1 Reports Involving Only Animals or Accidental Firearm Discharges

The focus of the ARA analysis is on identifying racial disparities and inequalities between people. Thus, Use of Force Reports involving only animals (e.g., humanely

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[44] Some police services have developed applications that their members use to enter the use of force incident information. This data is sent to the Ministry in XML format. The data collected in these applications is identical to the data collected on the PDF form.

[45] Some police services instruct their members to also use the provincial Use of Force Report to record information on use of force incidents not required under the PSA. If these reports are accidently sent to the Ministry they are deleted from the dataset, see section on out of scope reports.

[46] The datasets are based on calendar year. However, it is highly likely that some reports were misclassified because incident date was redacted prior to being sent to the Ministry. For example, the 2021 Use of Force dataset may contain data from 2022 Use of Force Reports. See the limitation section of this report for more information.

destroying an injured animal) or the accidental discharge of firearms when no persons other than officers were present, were excluded from this analysis. These incidents do not meaningfully add to analyses focused on racial disparity or disproportionality.

3.1.1.2 Receipt of Reports Describing Non-Reportable Force

The Ministry of the Solicitor General received some Use of Force Reports that did not indicate any provincially reportable use of force (e.g., a report where the display of a conducted energy weapon was the only force used). Some individual police services may require members to submit reports to the police service for use of force incidents that are not required under the Equipment and Use of Force Regulation. Where identified, these reports were removed from the dataset for analysis. As a result, the number of Use of Force Reports included in this technical report may not match the figures reported by individual police services.

3.1.2 Number of Data Variables (Dataset Columns)

The Use of Force Report used by police services from 2020-2022 contained 44 questions. Some of these questions were optional, not all questions were applicable to every use of force incident,[47] and the data from some fields seen on the PDF form, were not available to the Ministry of the Solicitor General (see the limitations section of this technical report for more information. A copy of the Use of Force Report PDF form used from 2020-2022 is available in Appendix A.) Thus, the amount of data available to be extracted from each Use of Force Report varied depending on the context of the use of force incident.

In total, twelve questions were not collected by the Ministry and therefore not available to use in these analyses. An additional eleven questions, while collected by the Ministry, were optional on the Use of Force Report. These questions were excluded from these analyses owing to low or inconsistent response rates. As noted in the limitations section of this report, low item response rates can result in poor quality data.

The dataset was created using data obtained from the remaining 21 questions. These questions were made up of 10 single-response and 11 multiple-response questions, and were a combination of open and closed, single and multiple-response questions, which together produced 172 columns of data for analysis.

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[47] Some questions are only relevant for certain types of reports. For instance, the questions about length or service and rank are only applicable to Individual Reports. Team Reports would require information about the type of team and the number of officers involved.

Of these data fields, there were 17 open-text responses[48] where a reporting officer typed in their responses. These open-text responses required cleaning and recoding into structured responses for analysis, resulting in the creation of 59 additional variables in the dataset including recoded:

- open-text responses
- multiple response options (e.g., type of force reported)
- summary variables to represent a set of questions

The final dataset includes a total of 114 columns[49] of data used in these analyses. This dataset is available on the Ontario Data Catalogue.

3.1.3 Number of Reports (Dataset Rows)

The 2020 provincial dataset was created from data extracted from Use of Force Reports there was reason to believe were from incidents that occurred between January 1, 2020, to December 31, 2020.[50]

Of the 9,047 Reports submitted to the Ministry for the 2020 dataset,[51] there were 1,519 Reports not applicable to race-based analyses. These 1,519 Reports were excluded from the dataset:

- Blank or Test Reports (3 reports)
- Reports submitted by First Nations police services, who are not subject to reporting requirements under the PSA (31 reports)
- Reports that did not involve force on people (1,331 reports)

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[48] There are 31 open-text response spaces on the Use of Force Report. Of these, 17 were for questions that were used in analyses (i.e., collected by the ministry and mandatory questions).

[49] There will be data columns in the Open Datasets that were not analyzed, but are included in the analysis dataset as they were used to understand or contextualize information from other questions. For example, there are 12 columns derived from optional questions relating to injuries and medical treatment. These were not analyzed due to low response rates, however, these questions were used to assist in determining whether reports described provincially reportable use of force (e.g., if a Use of Force Report indicated physical force as the only type of force used and it was explicitly stated that no medical attention was needed, the report was out of scope and therefore excluded. If there was no indication of whether medical attention was required, the report was retained for analysis).

[50] Use of Force Reports are submitted to the ministry on an ongoing basis. Although the ministry attempted to verify that reports were included in the correct year – this included coordinating/validating with police services – it is possible some reports were included in the incorrect year. See limitations section of this technical report for more information on the data quality issues related to the redaction of the incident date field.

[51] Occasionally police services submitted additional Use of Force Reports, later in the 2021 or 2022 calendar years, that they identified for the ministry as belonging to the 2020 calendar year. These were appended to the 2020 analytic dataset and the data cleaning process was re-run.

- Reports that were not based on provincially reportable[52] types of force (143 reports)
- Reports missing information about the person on whom force was used (11 reports)

The final 2020 dataset used for these analyses is composed of data from 7,528 Reports required under the provincial Regulation with complete data about the persons on whom force was used.[53]

These reports were split into subgroup datasets containing:

1. Reports with three or fewer individuals on whom force was used (n = 6,989) and
2. Reports with four or more individuals on whom force was used (e.g., crowd incidents, n = 539; these Reports were excluded from analyses (see limitations section of this technical report for exclusion rationale).

The same processes were followed to create datasets for 2021 and 2022. For 2021, 9,120 Use of Force Reports were submitted, of which 7,202 were applicable to race-based analysis (1-3 individuals: 6,677; 4+ individuals: 525). For 2022, 9,374 Use of Force Reports were submitted, of which 8,362 were applicable to race-based analysis (1-3 individuals: 7,863; 4+ individuals: 499).

3.1.4 Use of Force Reports Compared to Calls for Service

The Ministry received just over 7,500 Use of Force Reports attributable to use of force incidents occurring in Ontario in 2020. Every year, police in Ontario respond to approximately 4 million calls for service.[54] Based on these figures over 99.8 per cent of calls are resolved without the use of force.[55]

3.1.5 Use of Force Oversight and Accountability

Although use of force incidents are rare – especially when compared to total calls for service – it is important to review these incidents in depth because the costs to individuals against whom force was used can be high, up to and including death. Harm may also be experienced by their families and loved ones as well as the broader community and police service members. Reviews are intended to generate important learnings that can be applied to keep members of the public and police officers safe.

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[52] Reportable types of force are outlined in Section 14.5 of R.R.O. 1990, Reg. 926 under *Police Services Act*, R.S.O. 1990, c. P.15.

[53] Some police services did not have any – or any relevant – provincially reportable use of force incidents in a year, e.g., in 2020, Aylmer Police's only Use of Force Report was to dispatch an injured animal.

[54] This figure is based on the Police Administration Survey conducted by Statistics Canada. This figure only includes calls for service; police interactions with the public not initiated by a call for service are not included. Some police services may not have provided their calls for service data to Statistics Canada. Statistics Canada may suppress information to meet the confidentiality requirements of the *Statistics Act*.

[55] As defined by in the Equipment and Use of Force Regulation of the PSA.

They can also provide insight into how police agencies can provide more equitable and effective services.

There are multiple oversight bodies for policing in Ontario including for oversight of police use of force. This includes internal reviews by police training analysts and supervisors, and external reviews by oversight bodies like the Special Investigations Unit (SIU)[56] and police services boards when required.

This technical report is intended to contribute to identifying and addressing any systemic racism within police use of force It is not about individual accountability or adjudicating the appropriateness of use of force in specific incidents which is the purview of police services and oversight agencies. This report aims to identify any general patterns in police use of force that may then be explored further, to better understand whether the patterns are indicative of something to be addressed.

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[56] Other oversight bodies include the Office of the Independent Police Review Director (OIPRD), Ontario Civilian Police Commission (OCPC), Ontario Human Rights Commission, and the Ontario Ombudsman.

Section 4: Univariate Analysis for Reports with up to Three Individuals on whom force was used

4.1 Report Type

The "Report Type" section of the Use of Force Report was used to specify whether the report being submitted was by a single officer (Individual Report) or on behalf of a team of officers (Team Report).

On the Use of Force Report, the reporting officer selected either the "Individual" or "Team" checkbox. There were slight variations in the data elements collected depending on which Report Type the officer selected.

Report Type *
☐ Individual
☐ Team

*Figure 1: Report
Type Question*

Any officer who directly engaged a person in a reportable use of force would generally submit a Use of Force Report as an **Individual Report**. A single use of force incident may generate multiple Reports depending on the number of officers involved. For example, if three officers were involved in arresting a person and each officer applied a provincially reportable use of force, then each officer would submit an Individual Use of Force Report. In this scenario, one use of force incident would generate three Reports.

In some circumstances, a team leader would submit a **Team Report** on behalf of all members of the team. Team Reports would indicate the type of team and the number of team members involved. For example, a tactical team could be called upon to serve a warrant at a residence where it is suspected that people have firearms. The team may deploy to the scene with their firearms drawn and pointed towards the individuals as they emerge from the residence which would require submitting a Use of Force Report. Allowing one Team Report describing the incident, the number of team members involved, and the firearms pointed, prevents all team members separately submitting Individual Reports stating their firearms were pointed. If this is the only force type used during the incident, then only the Team Report may be submitted.

In this same scenario, if an officer on the team used additional force, for example they also discharged their CEW, that officer could also complete an Individual Report. This officer's Individual Report would be submitted in addition to the team leader's Team Report for the same use of force incident.

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Due to redactions in the submitted reports, the Ministry was unable to determine how many Individual or Team Reports referred to the same incident, officers, or persons involved from 2020 to 2022.

The Ministry was also unable to determine how many Individual Reports involved team members who applied force in addition to what was reported on a Team Report. In the Ministry's dataset, each Use of Force Report is counted as though it refers to a unique use of force incident, individual(s), and officer(s). In reality, many Use of Force Reports are likely referring to the same use of force incident and people involved (see the limitations section of this report for more information on the impact this has on using the Ministry's data in analyses). As such, the number of Use of Force Reports overcounts the number of use of force events.

Approximately 85 per cent of Use of Force Reports involving one to three individuals on whom force was used were Individual Use of Force Reports.

There is likely to be many substantive differences in use of force incidents that generate team reports compared to those that generate only individual reports. The most obvious difference is the number of officers responding. A team will necessarily involve a group of officers – and some teams have a minimum number of officers – whereas an individual report could involve only one responding officer.

It is also likely that the incidents that require a team response are qualitatively different than many of the incidents where teams are not called. These individually reported incidents would be expected to be highly variable, coming from any number of different law enforcement activities (e.g., traffic enforcement, investigations, serving warrants, and incidents that occur on general patrol). The purpose of a team is typically to respond to a particular type of call for service and they have received specialized training to do so. In contrast, individual officers may respond to a wide variety of call types.

There may also be differences in how members of the public respond to a specialized team compared to other officers. This would likely depend on their own perceptions of and experiences with police and with specialized teams.

4.2 Team Type

In the case of Team Reports, an open-text question required the reporting officer to describe the type of team involved in the use of force incident. In the 2020 dataset, over one thousand open text responses were submitted. These were recoded to group similar types of teams together for analyses purposes.

Of the 1,092 Team Reports in the 2020 dataset, 91 per cent (991) were for a tactical/hostage rescue or emergency response team[57] (which may refer to a containment team).[58]

These teams are often called out for high-risk situations and typically have specialized training, equipment, and clothing.

For example, the officers may wear heavier body armour or carry additional specialized weapons and equipment including shields. The additional equipment provides members of specialized teams with more response options than would be available to an officer with standard equipment.

The remaining 9 per cent (101) of Team Reports were for other specialized teams such as repeat offender parole enforcement teams, guns and gangs, canine, and provincial weapons enforcement teams. These teams may be in civilian clothing or have specialized uniforms and they often have additional or specialized training.

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[57] For a description of police public order units and emergency response services, see section 18 "Public Order Maintenance" and section 21 "Emergency Response Services under the Reg. 3/99: ADEQUACY AND EFFECTIVENESS OF POLICE SERVICES of the Police Services Act Link to O. Reg. 3/99: ADEQUACY AND EFFECTIVENESS OF POLICE SERVICES

[58] Police Services may refer to their tactical or emergency response teams by different names. The teams captured in this category include teams referred to as: Tactical, Tactical Rescue Unit, Tactical Containment Team, Emergency Task Unit, Emergency Services Unit, Emergency Response Team, Tactical and Rescue, Tactical Services Unit, Tactical Support Unit, Emergency Task Force, Emergency Response Unit, or Tactical Emergency Services Unit

4.3 Reporting Officer

If a Use of Force Report was submitted as an Individual Report, the reporting officer's length of service and rank were collected in open-text variables.

4.3.1 Length of Service

Length of service was collected as an open-text variable and was tracked in years of service completed. An individual who had been a police officer for four and a half years should have indicated four years of service completed.

Out of the 5,897 individual officer reports, the reporting officer's length of service ranged from less than one year to thirty-eight years. The median was seven years of service.

The largest proportion of Use of Force Reports were submitted by officers with fewer than five years of service (39 per cent in 2020). Use of Force Reports submitted by officers with fewer than ten years of service made up nearly 60 per cent of reports (3,403 Reports). Use of Force Reports submitted by officers with less than fifteen years of service made up over three quarters (78 per cent, 4,578) of reports.

Care is needed when interpreting how length of service may be related to use of force. A more complete analysis would compare these results with the distribution of service lengths for all police officers in Ontario, however, the Ministry does not currently have access to the data required to conduct this comparison. It is also important to understand how years of service may correlate with contact with the public or propensity to be in situations that are the most likely to result in force being required (e.g., performing frontline general patrol duties). Length of service is also likely to be highly correlated with rank, which is outlined in the next section.

4.3.2 Rank

Individual Reports included an open-text question for the reporting officer's rank. Subsections 8 (1), (2), and (3) of the general regulation under the *Police Services Act* (O. Reg. 268/10) defines the ranks that municipal police services in Ontario may have. These are limited to, in order:

- Chief of Police
- Deputy Chief
- Staff Superintendent
- Superintendent
- Staff Inspector
- Inspector
- Staff Sergeant / Detective Sergeant
- Sergeant / Detective
- Constable (1st to 4th class)

The Ontario Provincial Police (OPP) has a similar rank structure which includes in order:

- Commissioner
- Deputy Commissioner
- Chief Superintendent
- Superintendent
- Inspector
- Sergeant Major
- Staff Sergeant / Detective Staff Sergeant
- Sergeant / Detective Sergeant
- Provincial Constable / Detective Constable (1st to 4th class)

The open text rank data from the Use of Force Reports were coded into these ranks. Subsequently, the data were then coded into the following three broader categories:

- Management: includes Staff Sergeant, Detective Sergeant, Sergeant Major, Inspector, and all higher ranks
- Sergeants and Detectives: includes acting Sergeants and Detectives as well as Detective Constables

- Constables: includes first to fourth class Constable and Special Constables (e.g., Prisoner Escort Officers)[59]

Of the 5,892 individual officer Reports[60] in the 2020 dataset, 86 per cent (5,050) were submitted by constables, 14 per cent (822) were submitted by sergeants or detectives, and 0.3 per cent (20) by management ranks.

These percentages can be compared to the overall distribution of ranks for police officers in Ontario from Statistics Canada's 2021 Police Administration Survey.[61] Ranks from this survey were categorized to be comparable to the rank data categorized for Use of Force (i.e., Constable, Sergeant and Detective, and Management).[62] In Ontario, 77.8 per cent of officers were Constables, 13.1 per cent were Sergeants or Detectives, and 9.1 per cent were Management.

Different ranks of officers work in different environments with different responsibilities. In most cases, constables and/or sergeants make the first interaction with members of the public. Officers in management ranks are likely to have significantly fewer interactions with members of the public than do frontline officers. As such, it is not surprising to find that constables submitted 86 per cent of Use of Force Reports while comprising approximately 78 per cent of police officers in Ontario.

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[59] Police service boards and the OPP Commissioner can, with the Solicitor General's approval, appoint a special constable to act for a specific purpose and confer upon them some or all of the powers of a police officer (see section 53 of the *Police Services Act*). Special constables may be responsible for court security, prisoner transportation, security on transit systems, etc.

[60] The total number of Individual Reports in the 2020 dataset was 5,897. However, five of these reports contained missing or incorrect data regarding officer rank and thus were omitted from this field's analysis.

[61] Data are from Statistics Canada's Police Administration Survey (PAS) (see: Link to Police-reported crime statistics in Canada, 2021 and table 35-10-0078-01). The survey was not conducted in 2020 due to the COVID-19 pandemic. Some police forces did not provide a detailed breakdown by rank, only totals or subtotals. As a result, subtotals and totals were used in calculations to reduce the risk of undercounting. The PAS may include data from Ontario First Nations Police Services, the Ontario Use of Force Reports data does not.

[62] Statistics Canada includes some ranks in their tables that do not exist in Ontario (e.g., Sergeant Major). These are all included in the Management category except for Assistant Sergeant, which is in the Sergeant / Detective category.

4.4 Attire

Officer attire at the time of the use of force was captured for all Use of Force Reports. Reporting officers had to select either "Civilian Clothes" or "Uniform". Generally, all ranks except for detectives wear uniforms, unless on special assignment. Detectives typically wear civilian clothes.

Attire *
☐ Civilian Clothes
☐ Uniform

***Figure 2: Use of Force
Report – Attire***

Officers in uniform and in civilian clothing are likely to be performing different types of public safety activities. In addition, a key difference between the two types of attire is the equipment that officers will have. Officers in uniform have standard equipment and duty belt. The equipment that officers in civilian clothing have vary widely depending on their specific duties. Some detectives wear an adapted duty belt that includes different force options from frontline members and others will carry a small pistol and keep other items in a bag. Mobile surveillance teams may have additional equipment with them in vehicles, while officers on foot will have limited access to additional equipment.

In the 2020 dataset, 94 per cent of Reports (6,548)[63] involved the reporting officer or team in uniform at the time of use of force. The remaining 6 per cent (440) of Use of Force Reports involved the reporting officer or team in civilian clothes at the time of use of force.

Of the 440 Civilian Clothes Use of Force Reports, 377 were Individual Reports and 63 were Team Reports.

Of the Individual Reports, 65 per cent (245) were submitted by detectives and six per cent (24) were submitted by sergeants (19) and management ranks (five). The remaining 29 per cent (108) were submitted by constables, most of whom were on special assignment at the time of the use of force such as: investigations, drugs, guns and gangs, or plain clothes patrol assignments.

The 63 team Use of Force Reports involved teams on special assignments such as undercover firearm sales, investigations, fugitive apprehension, and surveillance details.

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[63] One report had missing data for the attire field and was omitted from this field's analysis.

4.5 Police Assignment

Use of Force Reports captured the type of assignment the officer or team was assigned to at the time of the use of force incident. This may include traffic duties, general patrol, criminal investigations, prisoner transport, or other assignments. Reporting officers selected one of the checkbox options provided on the Report.

The "Other" option allowed an open-text response. All open-text "Other (specify)" responses related to the type of assignment were reviewed and coded as appropriate. These responses were either coded into a) a recoded structured category, b) into a newly created category to capture high numbers of identical 'other' responses, or c) they remained under the category "Other".

Type of Assignment *
☐ Drugs   ☐ Foot Patrol   ☐ General Patrol   ☐ Investigation ☐ Off-duty   ☐ Traffic
☐ Other (specify) _____

Figure 3: Use of Force Reports by Type of Assignment

In the 2020 provincial dataset, most reports involved officers on **patrol**[64] (68 per cent, 4,769) when the use of force incident occurred.[65]

Officers assigned to or supporting a **tactical or emergency response** team submitted 12 per cent (809) of the 2020 Use of Force Reports. This included teams and individual officers assigned to assist with duties such as high risk warrants or armed barricaded persons.

Officers or teams on criminal **investigation** assignments submitted nine per cent (660) of 2020 Use of Force Reports. Investigation assignments can include investigating organized crime, homicide or other major crime, assisting a drugs, firearms, weapons investigations or other investigative task team.[66]

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[64] Reports under "General Patrol" (4,688) and "Foot Patrol" (62) were combined with other patrols as specified in the "Other (specify)" response (19), which included: bike patrol, plain clothes patrol, directed patrol, proactive patrol (marine patrol are coded under Specialized Unit)
[65] Only one Report specified "Off-duty" for assignment. For analysis, this field was recoded into "Other".
[66] Investigative teams include special operations and criminal intelligence units, street crime units of plainclothes detectives, surveillance teams, special task teams investigating break and enters, e.g. (BEAR), vehicle thefts, or other crimes, and major crimes projects and investigation teams.

The remaining 11 per cent (751) of reports were submitted by officers or teams on:

- **specialized units**[67] or other assignments[68] seven per cent (469)
- **drug**-related assignments two per cent (138)
- **traffic**[69] duties two per cent (144)

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[67] Specialized units include: Marine Units or underwater search and recovery, Guns and Gangs units, Canine teams, Repeat Offender Parole Enforcement (ROPE), Mobile Crisis Rapid Response, Community Response Units, Neighbourhood Resource Team, Problem Oriented Policing Unit, Mental Health Units, Outreach mobilization, school resource officer, High Enforcement Action Team (HEAT) etc.

[68] Other assignments are varied and include court duties, prisoner transports, hospital escorts, executing warrants (separate from tactical teams), paid duty, etc.

[69] Traffic duties includes Reduced Impaired Driving Everywhere (RIDE), festive RIDE, and Selective Traffic Enforcement Program (S.T.E.P.) assignments

4.6 Number of Individuals on whom force was used

The Use of Force Report captured the number of individuals[70] on whom provincially reportable force was used during the reported event. This includes only individuals who experienced force. Individuals who were present at the incident, but were not subject to provincially reportable force, are not included. For example, a public demonstration may have 50 people present. If an officer engages in a reportable use of force against two individuals, the officer will only report two individuals involved.

Number of Subject(s) Involved in Incident *

☐ Animal/No subject (e.g., unintentional discharge)

☐ One ☐ Two ☐ Three ☐ Other (specify #)_____

Figure 4: Use of Force Report – Number of Subject(s) Involved

When completing the Use of Force Report, officers could select checkboxes indicating if "One", "Two", or "Three" individuals were involved, or, if more than three individuals were involved, the officer would select "Other (specify #)" and enter in the number of individuals on whom force was directly applied. These open text responses were coded, and a new quantitative summary variable was created for the total number of individuals on whom force was used for each Use of Force Report. As noted in the Out-of-Scope Reports section, "Animal / No subject" Use of Force Reports were removed.

Detailed information, such as the perceived race and weapons carried by an individual was only captured for up to a maximum of three individuals. Perceived race was not recorded for additional individuals beyond three on whom force was used.

For Use of Force Reports involving one to three individuals, 76 per cent (5,341) involved a single individual, 16 per cent (1,124) involved two individuals, and seven per cent (524) involved three individuals. As noted in the limitations section of this report, these are not unique individuals, the same individual may have been involved in multiple Use of Force Reports.

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[70] The Use of Force Report uses the term "subject" when referring to the individuals on whom force was used. The analysis section of this technical report uses the term "individuals".

4.7 Number of Officers Involved

The Use of Force Report captured the number of officers present during the incident that led to a Use of Force Report being submitted.

For Individual Reports, the reporting officer indicated the number of officers who may have assisted in the incident, if any.

For Team Reports, the reporting officer indicated both the number of officers who were part of the team and the number of officers who may have assisted during the incident.

For both Team and Individual Reports, officers assisting in an incident are not necessarily participants in the use of force incident itself. For example, a large public demonstration may have a twenty-eight-member specialized team and an additional 17 officers assisting in crowd control, for a total of 45 officers involved. If the specialized team uses tear gas as part of crowd control, that Use of Force Report could list 28 members involved as part of the team and up to 17 additional officers as assisting during the incident, even if the assisting officers were not involved in the use of force.

There is no consistent definition of what it means to assist an officer who used a reportable level of force. They may have been involved in the event and submitted their own Use of Force Report, they may have been directly involved without using force on an individual, or they may have been in the vicinity. In the above example, the 17 officers assisting in crowd control may have spread out across an area and had no direct contact with the individual or involvement in the use of force itself.

Additionally, if any officers on a team used force above what is noted in the Team Use of Force Report, they may also submit Individual Use of Force Reports. As such, incidents involving multiple officers applying force may have multiple reports submitted, and thus be overrepresented in the dataset relative to incidents involving single officers acting alone,[71] which will only involve one report submitted per incident.

For the 2020 dataset, the number of officers involved in an event that generated a Use of Force Report ranged from one to seventy-three.

Over 85 per cent of reports involved ten or fewer officers. Most reports involved between two and four officers (46 per cent). In particular, the most frequently reported number of officers involved was three (18 per cent). However, this does not mean that most use of force incidents involved three officers because this analysis is done at the

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[71] In the 2020 Use of Force dataset, there were 5,897 Individual Reports, 10% of these reports (689) involved a single officer acting alone. In 15 reports, it was not clear how many officers assisted or were involved in the incidents. These Use of Force Reports were excluded from the analysis in this section.

Use of Force Report level. If three officers used provincially reportable force in one incident, each officer would submit an individual Use of Force Report. All three Use of Force Reports would indicate one incident with three officers involved.

Use of Force Reports involving ten or more officers were mostly Team Reports (67 per cent, 767 of 1,152).

4.8 Reason for Use of Force

In the Use of Force Report, there were eight[72] categories to indicate the reason force was used. Reporting officers could select more than one category. In addition, an open-text option was available for officers to select "Other (specify)" and enter a written response to specify a reason that was not covered by the eight categories. Where applicable, open-text responses were coded into either a recoded version of an existing structured category or a newly created category. The information used to code these new categories may have come from open text comments provided in this or other variables on the Use of Force Report.

Reason for Use of Force *
☐ Accidental   ☐ Destroy an Animal   ☐ Effect Arrest   ☐ Prevent Commission of Offence   ☐ Prevent Escape
☐ Protect Public   ☐ Protect Self   ☐ Other (specify) _____

Figure 5: Use of Force Report – Reason for Use of Force

New categories created were "protect another officer" and "protect the individual on whom force used." In general, Use of Force Reports where an officer indicated using force to protect the individual involved, it was often reported this was to prevent individual self-harm. Use of Force Reports were only included in this category when it was explicitly stated that force was to protect the individual and/or the individual was suicidal. Simply mentioning mental health[73] concerns was not sufficient to include a Use of Force Report as "Protect Individual."

Responding officers sometimes used the open-text field to provide additional information and context. Where the information was relevant, it was used to code the responses. Where the text did not provide additional information (e.g., it was used only to expand upon information already provided in the structured responses), the open-text was not recoded into a category. In both cases, the number of 'Other' responses was reduced accordingly.

The most common reason reported for the use of force (85 per cent, 5,927) was to Protect Self (which refers to the reporting officer). The second most common reason reported was to Effect Arrest (79 per cent, 5,513). In nearly two thirds of Use of Force Reports (63 per cent), the officer listed Protect Public[74] as a reason force was used. In addition, reporting officers listed protecting other officers (five per cent, 341), protecting

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[72] For analysis purposes, "Destroy an Animal" is excluded. This reason was only recorded in Use of Force Reports involving animals, which were excluded from the dataset used in all analyses in the report.
[73] References to mental health that were recoded as a reason for force were: effect a Mental Health Apprehension, coded as "Other", and prevent self-harm coded as "Protect Subject".
[74] "Public" includes victims, witnesses, bystanders, and the general public

individuals on whom force was used (two per cent, 104) or other reasons[75] (one per cent, 64) for the type of force reason.

Reasons reported for the use of force included:

- Protect Self (which refers to the reporting officer) 85 per cent (5,927)
- Effect Arrest 79 per cent (5,513)
- Protect Public was selected in nearly two thirds of Reports 63 per cent (4,414)
- Protecting other officers (five per cent, 341), protecting individuals on whom force was used (two per cent, 104) or other reasons (one per cent, 64)

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[75] Other includes entries such as "preventing the destruction of evidence", "remove from cell", "safety concerns", "holding baseball bat", "gain compliance", etc. There were two "Accidental" reason for force selected, these were recoded into "Other" for the purpose of this analysis.

4.9 Perceived Weapons Carried by Individuals on whom Force was Used

The Use of Force Report captured information about officers' perception of weapons carried by individuals on whom force was used. As noted previously, information was only collected for a maximum of three individuals.[76]

The information recorded was the officer's belief of whether an individual was carrying a weapon at the time of the use of force, and if so, what type of weapon. This belief could be based on what the officer was told when called to the scene or based on what they perceived during the incident. The reporting officer could choose as many of the options that apply:

- None - if they did not perceive the individual to be carrying a weapon
- Unknown - if they believed that the individual was armed, but were unsure of the type of weapon (e.g., the officer has received information that the individual is armed, but the officer did not see the weapon)
- Up to four different gun types: Revolver, Rifle, Semi-automatic, Shotgun
- Baseball Bat/Club
- Knife/Edged Weapon
- Other (specify)

Weapons Carried by Subject(s) *

	1	2	3
Baseball Bat/Club	☐	☐	☐
Knife/Edged Weapon	☐	☐	☐
Revolver	☐	☐	☐
Rifle	☐	☐	☐
Semi-automatic	☐	☐	☐
Shotgun	☐	☐	☐
None	☐	☐	☐
Unknown	☐	☐	☐
Other (specify) ▼	☐	☐	☐

Figure 6: Use of Force Report – Weapons Carried by Subject(s)

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[76] If more than three individuals on whom force was used were perceived to be carrying weapons, their weapons, their race, and any information about them or their involvement in the use of force was not collected on the Use of Force Report used by officers from 2020 to 2022.

If Other (specify) was chosen, the officer could write in an open-text field information about the weapon(s) they believed to be on or near the individual at the time of the use of force. In these Reports, a weapon includes any object that could be used to inflict harm. These include items typically understood as weapons (e.g., firearms, knives) and weapons of convenience that could be used to harm or threaten (e.g., from Use of Force Report responses: butane torch lighter, broken bottle, vehicles, hockey and lacrosse sticks, golf clubs, tire iron, glass plates, an air conditioner, chainsaw, crowbar, etc.).

The Use of Force Report did not collect information on whether an individual believed to have a weapon was then found to be carrying a weapon, if found weapons were real or replica, or if the individual used a weapon as part of the use of force incident. An individual may be perceived as possessing a weapon, even though they are unarmed, for example mistaking a cellphone for a firearm. As well, an officer may believe an individual is armed because a witness called in and reported a weapon or the individual themselves proclaimed they were armed when they were not.

Officers involved in the same incidents may also perceive things differently. For example, one officer may perceive an individual as armed and another officer perceive that same individual as unarmed. This same incident would result in two Use of Force Reports in which the presence of weapons was reported and categorized differently.

In the 2020 dataset, there were initially 902 Use of Force Reports that included "Other (specify)" and an open-ended response. When applicable, these values were recoded into one of the existing checkbox categories or into a newly created weapon type category where there were high numbers of similar responses. For example, where the "Other" weapon was an axe or a piece of glass, this was included in the Knife/Edged Weapon category.

In addition, the Baseball Bat/Club category was reconceived as "Blunt Objects." This category included individuals who were perceived as having a baseball bat or club (i.e., the checkbox on the form was selected) and "Other" blunt impact weapons like hammers and pipes.

If a Use of Force Report involved several individuals on whom force was used, they may have been perceived to have different weapons. Some individuals may have been perceived to be unarmed. For example, a Use of Force Report with three individuals could include one individual perceived to have a firearm, one a knife, and one who is perceived to be unarmed. This Use of Force Report would be included in the "Firearm" category and the "Knife/Edged Weapon" category.

The "unarmed" category includes only Use of Force Reports where officers selected "None" for perceived weapons for all individuals. The rest of the reports were coded as

"Armed" and at least one individual was perceived to have been carrying a weapon. The "Unknown" category includes Use of Force Reports where the type of weapon an individual was believed or perceived to be possessing was unknown.

The Use of Force Report did not record the specific type of force used on each individual. This means that, for incidents involving multiple individuals, the force recorded on the report may have been used on an individual perceived as unarmed who was part of a report that included individuals perceived as armed. This has been changed in the most recent version of the Use of Force Report.

In the 2020 dataset most Use of Force Reports involved people perceived or believed to be armed:[77]

- 67 percent (4,660) of reports at least one individual was believed **armed**
- 33 percent (2,322) of reports all individuals were believed **unarmed**

When at least one individual was perceived or believed by officers to be **armed,** the weapon perceived was a(n):

- **firearm** (real and replica as well as flare guns) in 22 percent (1,567) of reports
- **knife, sharp, or edged weapon** (includes chainsaws, axes, hatchets, machetes, pickaxes, razor blades, chisels, scissors, syringes, broken glass and bottles, etc.) in 21 percent (1,464) of reports
- **unknown weapon**[78] for 21 percent (1,439) of reports
- **blunt object** (includes hammers, crowbars, tire irons, baseball bats, lacrosse sticks, hockey sticks, steel pipes, golf clubs, broom sticks, shovels, sledgehammers, etc.) in 5 percent (338) of reports
- **other weapon** (includes aerosols like mace, pepper spray, and insecticide; explosives; vehicles used as weapons; crossbows and composite bows; and household objects like furniture, pots, and metal sculptures[79]) in 3 percent (189) of reports.

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[77] Seven Use of Force Reports were removed from analysis for this variable due to missing data on weapons carried. Fifteen reports had missing data for some individuals involved and were coded according to the weapons data provided on one individual. Two reports provided "Unknown" for one individual and missing weapons data for remaining individuals involved, these were coded as "Unknown" based on data provided. These reports may be undercounting total weapons involved in these reports.
[78] Includes incidents when police were unable to ascertain the weapon before engaging. This also includes incidents when police were called to the scene of an armed suspect, arrived on scene and withdrew handguns, but suspect had fled before police arrived.
[79] For Use of Force Reports coded as "armed", totals do not add up to 100% as a report can involve more than one weapon type. In most cases, reports included only one type of weapon. In 88% of Firearm Reports, firearms were the only type of weapon perceived. Knife / Edged Weapon Reports (87%) and Blunt Weapon (73%) also typically included only weapons of that type.

4.10 Type of Force

Officers are expected to be continually assessing situations and choosing the most reasonable option according to the persons involved and the context of the situation. Interactions between police and individuals may be fluid. As such, officers may use multiple force types in a single incident.

The Use of Force Report captured information about the type of force used, what order it was applied in (the rank), and whether the force was effective.[80] The "Other (specify)" category provided an open-ended field for officers to describe other types of force used that were not listed in the existing categories.

Type of Force Used *
(include all options used during incident and rank in sequence of use)

	Rank	Was Force Effective?	
		Yes	No
☐ Aerosol Weapon	_____	☐	☐
☐ Empty Hand Techniques – Hard	_____	☐	☐
☐ Empty Hand Techniques – Soft	_____	☐	☐
☐ Firearm – discharged	_____	☐	☐
☐ Firearm – pointed at person	_____	☐	☐
☐ Handgun – drawn	_____	☐	☐
☐ Impact Weapon – Hard	_____	☐	☐
☐ Impact Weapon – Soft	_____	☐	☐
☐ Other (e.g., conducted energy weapon, less lethal shotgun, "ARWEN") (specify)▼	_____	☐	☐

Figure 7: Use of Force Report – Type of Force Used

Definitions of force types are as follows:

- **Aerosol Weapons** are inflammatory agents delivered via spray and designed to temporarily impair an individual, typically by inducing a burning sensation of the skin and painful tearing and swelling of the eyes. In Ontario, officers are issued with oleoresin capsicum (e.g., pepper spray).
- **Empty Hand Techniques** involve taking physical control of an individual without the use of a weapon. A provincial Use of Force Report involving exclusively

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[80] No analyses were conducted on the order of applying different force types (rank) or whether the type of force was effective. Reporting officers cannot indicate using the same type of force more than once in the "rank" section. For example, an officer may draw a handgun before entering a situation, decide to deploy a CEW and holster the handgun, then re-draw the handgun. In this case, the second time the handgun is drawn would not be captured under the force rank.

Empty Hand Techniques is only required if an individual sustained an injury that required medical attention.

- o **Soft Techniques** include holds, pinning or grappling, and pressure points.
- o **Hard Techniques** include strikes with the hand, elbow, knee, leg, or foot.
- **Impact Weapons** are objects or devices used to deter or physically control an individual's actions, to defend against an attack by delivering strikes with that weapon. In Ontario, police are issued expandable batons. Police may also use "weapons of opportunity," when necessary, for example a shield, rock, police radio, or other available object.
  - o **Soft Application** involves using the impact weapon to pry an individual loose. This could include using a baton to pry an individual's arms off an object or out from under their body.
  - o **Hard Application** involves using the impact weapon to strike major muscle groups to cause pain compliance with the objective of preventing assault by changing the subject's intent and behaviour. For example, using a baton to strike an individual's upper leg to stop them from kicking.
- **Conducted Energy Weapons (CEWs)** deliver a series of electrical pulses intended to temporarily incapacitate and allow apprehension of subjects through pain compliance and involuntary muscle contractions. Note that on the Report, CEWs would be identified in open-text responses only. Two of three ways a CEW is typically used required a provincial Use of Force Report, Cartridge / Probe Mode and Drive / Push Stun Mode:
  - o **Cartridge / Probe Mode:** Officers fire the CEW's metal probes to penetrate an individual's clothing or skin to deliver an electric current to attempt to achieve neuromuscular incapacitation. Reports were required even if the probes do not strike the individual.
  - o **Drive / Push Stun Mode:** Officers use the CEW to make direct contact with the individual to deliver electrical energy, which causes pain and only localized muscular disruption. This category is included in analysis.
  - o **Demonstrated Force Presence:** Officers unholster the CEW and display it to a person, which may include demonstrating a warning arc, with the intention of achieving compliance. This use type does not involve the weapon making contact with the body or delivering any electric pulses to a person. This category of use was not included in analysis as this was not a provincially reportable use of force under the Regulation.
- **Firearms** are defined in the *Criminal Code* (and referenced in the Regulation) as a barrelled weapon from which any shot, bullet or other projectile can be discharged and that is capable of causing serious bodily injury or death to a person. This includes any frame or receiver of such a barrelled weapon and anything that can be adapted for use as a firearm. In this technical report, this

includes firearms that fire bean bags or other types of projectiles (e.g., a "sock gun" or an ARWEN[81])

- o **Discharged** means that the firearm was fired, whether it was fired at a person or not.
- o **Pointed** means that the barrel of the firearm was directed towards an individual.

- **Handguns** are a firearm that is designed, altered or intended to be aimed and fired by the action of one hand. Under the Regulation, officers were required to complete a Use of Force Report if they unholstered their handgun in front of a member of the public, regardless of whether they discharged or pointed their handgun.
- **Other** included any force types used that are not captured in the above categories.

Open-text responses were coded into either a recoded version of existing structured categories, or into a new category (e.g., CEW) if there were enough responses to create a new category, or they remained as an "Other" force type. [82]

If open-text responses omitted how a type of force was used (e.g., the response said only "CEW" or "Carbine"), it was assumed these force types were used in a provincially reportable manner. If this assumption was incorrect (e.g., the CEW was only shown to the individual or the Carbine was removed from a police cruiser but not pointed or discharged at a person), the number of provincially reportable Use of Force Reports for those force types would be inflated.

Use of Force Reports received by the Ministry may include both provincially reportable and provincially non-reportable types of force. For example, an officer may display their CEW (this is non-reportable) and also draw their handgun (this is reportable). The related Use of Force Report submitted to the Ministry may include data on both the provincially reported handgun drawn and the non-reportable display of the CEW. As the non-reportable CEW display occurred in the context of an otherwise provincially reportable incident, it would still appear in the use of force dataset used in this analysis and posted on the Ontario Data Catalogue, because the Use of Force Report overall was reportable. However, because this technical report analyzes only provincially

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[81] ARWEN (Anti-Riot Weapon ENfield) is a firearm that launches a variety of non-bullet projectiles. This includes plastic bullets and tear gas. Note that ARWEN would be identified in open-text responses only.
[82] There were 185 Use of Force Reports where the "Other" option was selected, but where the information on force type was missing or insufficient to determine the force type. In 53 reports, the open-text response was to refer to the narrative, which was not provided to the ministry. In 3 reports, the open-text field was blank. These reports were coded as missing for analysis using this variable.

reportable uses of force, the display-only of the CEW in this example would be excluded from analyses.

The breakdown of the types of force were:

- Aerosol: 1.9 per cent (132 Reports)
- Empty Hand Techniques – Hard: 8.7 per cent (611 Reports)
- Empty Hand Techniques – Soft: 16.1 per cent (1,128)
- Firearm – Discharged: 0.4 per cent (26 Reports)
- Less-Lethal Firearm – Discharged: 0.13 per cent (9 Reports)
- Firearm – Pointed: 52.1 per cent (3,639 Reports)
- Less-Lethal Firearm – Pointed: 1.9 per cent (130 Reports)
- Handgun – Drawn: 27.8 per cent (1,947 Reports)
- Impact Weapon – Hard: 0.1 per cent (71 Reports)
- Impact Weapon – Soft: 0.1 per cent (51 Reports)
- Conducted Energy Weapon: 30.0 per cent (2,078 Reports)
- Other: 2.6 per cent (185 Reports)

Some important notes about these figures. Totals add to more than 100% because Use of Force Reports can involve more than one force type. When a Use of Force Report included an open-text response that indicated use of either a firearm or a CEW, but not how the weapon was used, it was assumed that the incident involved a provincially reportable use of force. For firearms, these Use of Force Reports were coded as firearm pointed. An example is if a Use of Force Report stated "rifle" and in another section of the report it was noted that no rounds were fired.

4.11 Officers' Perceptions of Individuals' Race

On the Use of Force Report, reporting officers must select one of seven race categories to describe the perceived race of the individual involved in a use of force incident. Race information is only captured for up to a maximum of three individuals.

Perceived Subject Race *
What race category best describes the subject(s)?
(Select only one per subject)

	1	2	3
Black	☐	☐	☐
East/Southeast Asian	☐	☐	☐
Indigenous	☐	☐	☐
Latino	☐	☐	☐
Middle Eastern	☐	☐	☐
South Asian	☐	☐	☐
White	☐	☐	☐

Figure 8: Use of Force Report – Perceived Subject Race

4.11.1 Data Derived from Participant Observer Information

The Use of Force Report collects the reporting officer's perception of the individual's race at the time of the force incident. This is also known as Participant Observer Information (POI), outlined in ARDS 40. The ARDS provides the race categories that must be included on the Use of Force Report. Police are instructed not to ask an individual to provide their self-identified race.

It is important to note that responses are based on the officer's perception of the individual's race. This perception may not match the person's self-identified race. As well, multiple officers involved in the same use of force incident may perceive the same person as a different race category, this can lead to a single individual being counted multiple times and in more than one race category.

This question is mandatory on the Use of Force Report, even though officers may experience challenges in perceiving the individual's race. For example, an individual may be wearing a mask or disguise. If the incident location is dark or poorly lit, or if the scene is chaotic or evolving rapidly, this would be particularly challenging. It may not be possible for the officer to see well enough to perceive the individuals' skin, their clothing or accoutrements, hear their voices, or note any other attributes that may lead the

officer to perceive a particular racial group. Other aspects of the incident, such as weapon focus, may also hamper perception of a person's race.[83]

Officers may also not interact directly with any individuals. For example, officers receive a call that armed individuals are present inside a residence at a party. Prior to entering the residence, the officers draw their handguns in the presence of members of the public standing outside the residence. In this case, a Use of Force Report is required. If the armed individuals have fled before police arrived, there would be no opportunity for officers to perceive the armed individuals or the witnesses. However, reporting officers must still provide a response to this question. Their responses may be based on an officer's inference about what they anticipated the race of the individuals(s) may have been based on information received prior to arriving on the scene (e.g., from the 911 dispatcher), based on the location of the incident, on who else was on the scene, or information from other sources.

In all circumstances, officers are required to indicate their perception of the individual's race on whom force was used. This could include incidents where there are minimal cues for officers to use to perceive race (e.g., an incident that occurred in a commercial area and there were limited opportunities to perceive individuals). There is no "I don't know" option. This reflects the requirements of the ARDS. There is also no option for mixed race or option to select multiple race categories for one individual, i.e., even if the officer knows the individual identifies themselves as two races, "race A" and "race B", the officer must choose and record the category the officer believes the person most resembles.

4.11.2 Overview of Perceived Race by Report

The Use of Force Report allowed officers to capture information about race for up to three individuals, even if there were additional individuals involved in the use of force incident. It is not clear how officers determined which individuals to provide perceived race information for in the Use of Force Report.

In cases of Use of Force Reports that involved more than one individual on whom force was used, the reports where all individuals were perceived to be of the same racial group (e.g., all perceived as "race A" or all perceived as "race B") were coded under the perceived racial group. However, in cases where individuals were perceived as belonging to different racial groups (e.g., some individuals were perceived as "race C" and some were perceived as "race D"), the Use of Force Report was coded under a

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[83] The Weapon Focus Effect refers to the tendency of witnesses to focus their attention on a weapon that is present. The result is less attention focused on the appearance of the individual holding the weapon and the witness providing less detail about the individual when they are later asked for a description.

newly created category as "Multiple Races." The "Multiple Races" category was created for the purposes of analysis; it is not a checkbox option on the Use of Force Report.

In most (approximately 95 percent) of Use of Force Reports, officers perceived all individuals on whom force was used as being of the same race. In five per cent of reports, officers perceived individuals as belonging to differing racial groups.[84]

Three quarters of Use of Force Reports were classified as either involving all individuals perceived as White (55 per cent) or all individuals perceived as Black (21 per cent). The remaining Use of Force Reports involved all individuals perceived as Indigenous (six per cent), East/Southeast Asian (5 per cent), Middle Eastern (4 per cent), South Asian (2 per cent), and Latino (2 per cent).

As noted in the limitations section, there are several important cautions for interpreting these data. The analyses are presented by report, rather than by the individual. A Use of Force Report that included one individual perceived as Black has equal weight in the analyses as a Use of Force Report that included three individuals perceived as White. As well, since incidents involving multiple officers could result in multiple Use of Force Reports about the same individual, a report-based analysis could lead to overcounting or undercounting racial differences.

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[84] For the 2020 dataset, there were 11 Use of Force Reports where the perceived race was not captured due to data issues on transmission. As noted earlier, they have been removed from the dataset used for analysis in this technical report.

Section 5: Other Analyses

This section compared only Use of Force Reports where all individuals were perceived as being the same race. Use of Force Reports involving people perceived to be of different races, "Multiple Race" Reports, were excluded in analyses of racial differences between identified racial groups. This is because it was not possible to determine which details related to which individual. Absent those connections, it is not possible to conduct race-based analysis with those Use of Force Reports.

5.1 Racial Comparison of Reasons for Use of Force

Reporting officers indicated the reasons they used force. Officers could choose multiple reasons for force. As noted in the univariate section, some new categories were derived from open-text responses that appeared frequently (e.g., protect another officer).

When comparing Use of Force Reports involving people perceived to be of a particular racial category, there does not appear to be any substantive difference in four of the top five reasons officers provided for using force: to protect self (the reporting officer), to effect an arrest, to protect the public, and to prevent the commission of an offence.

The proportion of Use of Force Reports that included one of these four reasons is relatively consistent across officers' perceptions of the race of the people involved. There also does not appear to be a pattern of particular racial categories consistently being at the bottom or top of a range.

- For "**protect self**," the range across Use of Force Reports by perceived racial category was **five per cent**, from 82 per cent (people perceived as Latino) to 87 per cent (people perceived as Middle Eastern)
- For "**effect arrest**," the range across Use of Force Reports by perceived racial category was **eight per cent**, from 74 per cent (people perceived as Middle Eastern) to 82 per cent (people perceived as East/Southeast Asian)
- For "**protect public**," the range across Use of Force Reports by perceived racial category was **eight per cent**, from 61 per cent (people perceived as White) to 69 per cent (people perceived as East/Southeast Asian)
- For "**prevent the commission of an offence**," the range across Use of Force Reports by perceived racial category was **seven per cent**, from 24 per cent (people perceived as East/Southeast Asian) to 31 per cent (people perceived as Latino and as Middle Eastern)

An additional reason for force was to "**prevent escape**." The range for this reason was **20 per cent**. This result could be due to a genuine difference in individuals' attempts to escape; officers' perceptions of individuals' behaviour; or reporting artifacts, particularly low cell counts. However, even if the two categories with the lowest number of Use of Force Reports are removed, the range across racial categories is still 11 per cent.

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- **27 per cent** for people perceived as Indigenous (116 of 436 reports)
- **30 per cent** for people perceived as White (1,150 of 3,807 reports)
- **32 per cent** for people perceived as East/Southeast Asian (111 of 348 reports)
- **33 per cent** for people perceived as Middle Eastern (97 of 293 reports)
- **38 per cent** for people perceived as Black (555 of 1455 reports)
- **40 per cent** for people perceived as South Asian (67 of 169 reports)
- **47 per cent** for people perceived as Latino (51 of 108 reports)

Protect another officer (341), protect subject (104), and "other" reasons for force (64) had too few Use of Force Reports to detect if there were any substantive differences based on perceived race of the individuals involved.

5.2 Racial Comparison of Perceived Weapons Carried by Individuals on whom Force was Used

As noted in the univariate section, reporting officers indicated whether they perceived or believed that an individual was armed. This could be based on information they received before arriving or what they observed during the incident. It is not necessarily the case that individuals perceived as armed possessed any weapons.

This perception or belief that an individual is armed is one factor that officers would likely consider when choosing a course of action. All other things being equal, an incident where an individual is armed is likely to present more risk than if the individual was not armed.[85] Officers may choose different approaches or tactics depending on whether individuals are perceived as being armed, and with what. Most relevant to this analysis, officers may use different types of force depending on the type of weapons individuals are perceived to have.

It is important to note that there are several possible explanations for any observed differences across race categories. These explanations are not mutually exclusive.

First, it is possible that individuals from some perceived racial groups are more likely to be armed or more likely to be armed with particular weapons (e.g., firearms). Second, it is possible that implicit bias leads officers to be more likely to perceive weapons for individuals of some perceived racial groups than others. Officers may be more likely to infer that an object being held is a weapon for members of some perceived racial groups than others. Third, it is possible that differences are due to what callers to emergency services reported. As this variable is what officers perceived or believed, if a caller reported seeing an individual with a firearm, officers are likely to report belief that that an individual was armed with a firearm. Members of the public may be more likely to misperceive objects as weapons for some perceived racial groups than for others. Members of the public may also knowingly provide false information to police.

5.2.1 Perceived to be Unarmed

In a third of Use of Force Reports (33 per cent), officers perceived all individuals to be **unarmed**. There were fewer reports of individuals perceived as Black or Latino as unarmed (27 per cent) compared to individuals perceived as White, South Asian, or Indigenous (approximately 38 per cent). As noted previously, caution should be used

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[85] However, all things are rarely equal. For example, the risk is higher with an individual who is fully prepared to use a baseball bat to cause harm than with an individual with a gun who has no intention of firing it.

interpreting any of these differences, with extra caution for Latino, the smallest race category, with only 108 reports.

There also appear to be differences in perceived type of weapon related to perceived race.

5.2.2 Perceived to be Armed with a Firearm

For individuals perceived as Black, officers reported perceiving or believing that at least one individual was armed with a **firearm** in 31 per cent (448 of 1,455) of Use of Force Reports. For individuals perceived as Indigenous, the figure was 13 per cent (58 of 436 Use of Force Reports) and for individuals perceived as White, it was 20 per cent (746 of 3,807).

5.2.2.1 Type of Firearm

There also appears to be a difference in the type of firearm officers perceived across perceived race categories.[86] Officers were more likely to perceive or believe that semi-automatic firearms or revolvers were involved in Use of Force Reports with individuals perceived as Black (26 per cent, 377 Reports) and Middle Eastern (18 per cent, 53 reports) than reports for other perceived racial groups (White: 10 per cent, 397 reports; Indigenous: six per cent, 26 Reports). Conversely, long guns (i.e., rifles and shotguns) were more likely to be perceived or were believed to be involved in Use of Force Reports with individuals perceived as White (five per cent, 177 reports) or Indigenous (four per cent, 18 reports) compared to other perceived racial groups (zero to two per cent). A high degree of caution is required in interpreting these results due to the small numbers of Use of Force Reports in some categories, particularly for long guns.

5.2.3 Knives or Edged Weapons

For knives or edged weapons, the pattern was the opposite of the one found with perceived firearms. Officers were most likely to report perceiving or believing that at least one individual had a knife/edged weapon for Use of Reports with individuals perceived as Indigenous (29 per cent, 126 of 436 Reports). They were least likely for reports with individuals perceived as Black (15 per cent, 225 of 1,455 reports).

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[86] Includes only Use of Force Reports where the officer selected one of the structured response options. This does not include the 300+ open-text responses that mentioned firearms, as officers did not always specify the type of firearm.

5.2.4 Blunt Objects or Other Weapons

There are too few Use of Force Reports with blunt objects (338 reports) or other weapons (189 reports) to compare across perceived race.

5.2.5 Unknown Weapons

At the higher end, officers were most likely to report perceiving or believing at least one individual had an unknown type of weapon for Use of Force Reports with individuals perceived as East / Southeast Asian (31 per cent), Black (25 per cent), and Middle Eastern (25 per cent). At the lower end are reports with individuals perceived as White (17 per cent) and Indigenous (11 per cent).

5.2.6 Summary

Overall, there were more Use of Force Reports of individuals perceived as Black or Latino who were perceived by officers as armed with some type of weapon. Extra care is needed when interpreting results for Latino due to the small number of reports. Where individuals were perceived or believed to be armed, there were more reports of individuals perceived as Black who were believed or perceived as possessing a firearm. There were more reports of individuals perceived as Indigenous who were perceived to be possessing a knife or edged weapon.

5.3 Racial Comparison of Type of Force

Comparing the force used on individuals perceived as being of different races contributes to analysis of racial differences. While the Use of Force Report does not provide a full picture of the incident – which may be fluid – or of the incident context, analyzing potential differences in type of force for different perceived races may generate insight or identify avenues for further study.

Officers may have used more than one type of force in an incident (e.g., used a CEW and a baton in the same incident). The results in this section are for Use of Force Reports where any force type was used. As such, a Use of Force Report may be included in analysis for more than one force type.

Some use of force categories on the Use of Force Report included too few reports to analyze based on perceived race. Where appropriate, force categories were combined to allow analysis (e.g., Physical Force includes Hard and Soft Empty Hand Techniques and relevant "Other" responses).

5.3.1 Firearms

Use of firearms includes a handgun being drawn or a firearm being pointed or discharged. Firearms include barreled weapons that fire less-lethal projectiles (e.g., ARWEN). Officers may have used other types of force in addition to firearms.

The highest proportion of Use of Force Reports that included police using a firearm was for reports where individuals were perceived as Black (77 per cent, 1,126 of 1,455). For Use of Force Reports with individuals perceived as White, the proportion of reports including police using firearms was 62 per cent or 2,370 of 3,807. The lowest proportion of Use of Force Reports where police used a firearm was in reports involving people perceived as Indigenous (48 per cent, 209 of 436).

The pattern of results is the same when Firearm – Pointed and Handgun – Drawn are analyzed separately. There were too few Use of Force Reports involving a firearm being discharged to detect a pattern for this force type.

5.3.2 Conducted Energy Weapons

The highest proportion of Use of Force Reports where officers used a CEW was in reports with individuals perceived as Indigenous (46 per cent, 201 of 436) and the lowest proportion was for reports with individuals perceived as Black (21 per cent, 311 of 1,455). The use of CEWs for individuals perceived as White was 34 per cent or 1,309 of 3,807).

As above, this analysis only compares Use of Force Reports wherein a CEW was used with Use of Force Reports where no CEW was used. Other types of force may have been used in addition to the CEW, including use of a firearm.

5.3.3 Impact Weapons

There were few Use of Force Reports that included the use of Impact Weapons (Hard: 71 reports, Soft: 51 reports). Even when these two categories were combined and relevant Use of Force Reports from the Other category[87] were included (185 Reports), there were too few reports to generate reliable results.

5.3.4 Physical Force

Physical Force here is a combination of Empty Hand Techniques – Hard (611 reports), Empty Hand Techniques – Soft (1,128 reports), Canine (86 reports), and relevant Other open-text responses (1 report). In total, 1,547 Use of Force Reports included at least one use of physical force.

Only the Black, White, and Indigenous categories included more than 100 Use of Force Reports. There is no difference between the percent of Use of Force Reports in these racial categories where physical force was used (Black: 22 per cent; White: 22 per cent; Indigenous: 23 per cent). For the other racial categories, there were too few reports to generate reliable results.

5.3.5 Aerosol

Aerosol weapons were used in 132 Use of Force Reports. There were no racial categories that included more than 100 reports. As such, particular care is required in interpreting the results. There is a slightly higher rate of use of aerosol weapons in reports where individuals were perceived as Indigenous (five per cent) compared to other perceived races (one to two per cent for each other category). This pattern was found across the three years of data. It is not clear whether this represents a genuine difference in use of force or is merely a reporting artefact. This merits follow-up with improved data.

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[87] This includes Use of Force Reports where the open-text response makes reference to the use of an impact weapon (e.g., baton), but does not provide a description of how the weapon was used. The distinction between Impact Weapon – Hard and Impact Weapon – Soft is how the weapon is used, rather than the type of weapon itself. For the univariate section, these were included as Other because it was not possible to classify them as Hard or Soft (e.g., noting use of a shield, but not whether it was used to strike an individual, pry them off an object, or in another way). When Hard and Soft are combined, it is not necessary to perform this classification in order to use the Use of Force Report.

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Section 6: Summary and Conclusions

This technical report is the Ministry of the Solicitor General's first race-based review of the Use of Reports submitted by police services. However, due to the quality and constraints of data collected by the Ministry through the Use of Force Report for the years of 2020-2022, the Ministry's ability to carry out a proper and fulsome race-based analysis as required by the ARDS is limited.

As noted throughout this report, there are major limitations to the data and, by extension, the type of analysis that can be conducted and the reliability of the results. In particular, the Ministry is not able to conduct racial disproportionality and disparity indices using the data because the Ministry is analyzing Use of Force Report level data. All analysis is based on the number of Use of Reports received rather than the number of incidents or the number of individuals on whom force was used.

Until improved data are available, the Ministry of the Solicitor General is limited in the conclusions that can be made using its own 2020-2022 data alone. However, when the results from the Ministry data are considered with other factors, some tentative conclusions can be made.

It is important to note that identifying racial disproportionality or disparity does not provide an explanation for any differences. Disproportionality measured in police use of force does not necessarily imply racial discrimination or racial bias by police. This is particularly true when analysis uses only a single benchmark and/or does not factor out other important explanatory variables. Multiple benchmarks and multivariate analysis are required to properly evaluate the underlying factors influencing disproportionality scores.

Multiple factors may contribute to any particular racialized group being overrepresented or underrepresented in police use of force data. To measure the extent to which any disproportionality is directly attributable to police actions (organizational or individual), it is necessary to control for other factors and focus on elements within officers' discretion and control. For example, once contact is made, did officers use disproportionate or disparate force on individuals perceived as different racial groups, when accounting for factors that might lead to legitimate differences (e.g., individual behaviour, weapons involved, incident context)?

Without analysis that explores factors explaining disproportionality and disparity, these scores simply identify divergences from the group's prevalence in the benchmark population or from the outcomes of other racialized people. In the context of this report on police use of force, the data does not include enough information about the circumstances and factors that influenced a use of force. Without this information, the results have no explanatory value for any racial disproportionalities or disparities measured in police use of force.

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The Ministry of the Solicitor General has taken steps to address some of the data collection issues by introducing a modernized Use of Force Report that includes additional questions and provides more comprehensive response options. The Ministry also reduced the number of data fields redacted prior to the Use of Force Reports being submitted to the Ministry.

Police officers began using the modernized Use of Force Report as of January 1, 2023. It is anticipated that the data and structural changes implemented with the modernized Use of Force Report, will yield better data. For example, in the new Use of Force Report, officers will identify the number of individuals involved and will be prompted to include perceived race and type of force used for all people on whom force was used. The additional data about race combined with other improvements made to the Use of Force Report and data collection processes are expected to lead to better analysis capability going forward.

Section 7: Appendices

7.1 Appendix A: Ontario Use of Force Report 2020-2022

Link to Use of Force Form

Ontario ✦ Ministry of the Solicitor General — Use of Force Report
Police Services Act

Fields marked with an asterisk (*) are mandatory. Check more than one box in each section, where appropriate.

Police Service * | **Location Code (if applicable)**

Part A

Date (yyyy/mm/dd) * | Time Incident Commenced (24 hour) * | Time Incident Terminated (24 hour) *

Report Type *
- Individual — Length of Service (years completed) _____ | Rank _____
- Team — Type of Team _____ | Number of Police Officers Involved _____

Type of Assignment *
- Drugs
- Foot Patrol
- General Patrol
- Investigation
- Off-duty
- Traffic
- Other (specify) _____

Type of Incident *
- Alarm
- Break and Enter
- Domestic Disturbance
- Homicide
- Other Disturbance
- Robbery
- Serious Injury
- Suspicious Person
- Traffic
- Weapons Call
- Other (specify) _____

Police Presence at Time of Incident *
- Alone
- Police Assisted (specify #) _____

Attire *
- Civilian Clothes
- Uniform

Number of Subject(s) Involved in Incident *
- Animal/No subject (e.g., unintentional discharge)
- One
- Two
- Three
- Other (specify #) _____

Perceived Subject Race *
What race category best describes the subject(s)? (Select only one per subject)

	1	2	3
Black	☐	☐	☐
East/Southeast Asian	☐	☐	☐
Indigenous	☐	☐	☐
Latino	☐	☐	☐
Middle Eastern	☐	☐	☐
South Asian	☐	☐	☐
White	☐	☐	☐

Type of Force Used *
(include all options used during incident and rank in sequence of use)

	Rank	Was Force Effective? Yes	No
Aerosol Weapon	_____	☐	☐
Empty Hand Techniques – Hard	_____	☐	☐
Empty Hand Techniques – Soft	_____	☐	☐
Firearm – discharged	_____	☐	☐
Firearm – pointed at person	_____	☐	☐
Handgun – drawn	_____	☐	☐
Impact Weapon – Hard	_____	☐	☐
Impact Weapon – Soft	_____	☐	☐
Other (e.g., conducted energy weapon, less lethal shotgun, "ARWEN") (specify) ▼	_____	☐	☐

Reason for Use of Force *
- Accidental
- Destroy an Animal
- Effect Arrest
- Prevent Commission of Offence
- Prevent Escape
- Protect Public
- Protect Self
- Other (specify) _____

Type of Firearm Used (if applicable)
Number of Rounds Discharged
- Revolver _____
- Rifle _____
- Semi-automatic _____
- Shotgun _____
- Other (specify) ▼ _____

Distance * (between you and subject/animal at the time the decision was made to use force)

	Animal	1	2	3
Less than 2 metres	☐	☐	☐	☐
2 to 3 metres	☐	☐	☐	☐
3 to 5 metres	☐	☐	☐	☐
5 to 7 metres	☐	☐	☐	☐
7 to 10 metres	☐	☐	☐	☐
Greater than 10 metres	☐	☐	☐	☐

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Alternative Strategies Used (if applicable)

☐ Concealment   ☐ Cover   ☐ Verbal Interaction   ☐ Other (specify) _____

Weapons Carried by Subject(s) *	1	2	3
Baseball Bat/Club	☐	☐	☐
Knife/Edged Weapon	☐	☐	☐
Revolver	☐	☐	☐
Rifle	☐	☐	☐
Semi-automatic	☐	☐	☐
Shotgun	☐	☐	☐
None	☐	☐	☐
Unknown	☐	☐	☐
Other (specify) ▼	☐	☐	☐

_____

Location of Subject's Weapon
(At time decision was made to use force)

	1	2	3
At hand	☐	☐	☐
Concealed on person	☐	☐	☐
In-hand	☐	☐	☐

Total Number of Rounds Fired by Subject(s) (if applicable)

_____

Location of Incident *

Outdoors
☐ Laneway   ☐ Motor Vehicle   ☐ Park
☐ Roadway   ☐ Rural   ☐ Yard
☐ Other (specify) _____

Indoors
Private Property   ☐ Apartment   ☐ Hallway   ☐ House
Public Property   ☐ Commercial Site   ☐ Financial Institution   ☐ Public Institution
☐ Other (specify) _____

Weather Conditions *

☐ Clear   ☐ Cloudy   ☐ Fog   ☐ Rain   ☐ Snow/Sleet   ☐ Sunny
☐ Other (specify) _____

Lighting Conditions *

☐ Dark   ☐ Daylight   ☐ Dusk   ☐ Good Artificial Light   ☐ Poor Artificial Light
☐ Other (specify) _____

Person Injured

	Medical Attention Required? Yes	No	Nature of Injuries Minor	Serious	Fatal	Unknown
Self	☐	☐	☐	☐		
Other Police Officer	☐	☐	☐	☐	☐	☐
Third Party	☐	☐	☐	☐	☐	☐
Subject 1	☐	☐	☐	☐	☐	☐
Subject 2	☐	☐	☐	☐	☐	☐
Subject 3	☐	☐	☐	☐	☐	☐

Narrative: (If no occurrence report) – Do not include personal names or information.

Reviewed by Supervisor?	☐ Yes ☐ No	Recommended Post Traumatic Incident Counselling?	☐ Yes ☐ No	Recommended Other Training?	☐ Yes ☐ No	Date (yyyy/mm/dd) *	Reviewed by Training Analyst?	☐ Yes ☐ No

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Part B	
Incident Number	Officer Involved (name, rank and badge number) *
Date of last use of force refresher training (yyyy/mm/dd)	Would you like to participate in an interview with a training sergeant/ analyst to discuss this incident and/or use of force training? ☐ Yes ☐ No
Additional Training Recommended By: ☐ Training Analyst ☐ Supervisor	Type of Training Recommended

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[**Training Analyst Only Submit to Solicitor General**]

7.2 Appendix B: Summary of the Principles Governing the Use of Force by Police

Police officers face situations where they may use force in carrying out their duties, and to ensure their own safety and that of the community. The parameters governing the use of force by police officers are contained in the *Criminal Code*, other federal and provincial legislation and regulations, the common law, and the *Charter of Rights and Freedoms*. The broad principles governing the use of force by police may be summarized, as follows:

1. THE USE OF FORCE BY POLICE MUST BE AUTHORIZED BY STATUTE OR THE COMMON LAW: Police officers may use force in the execution of duty only if permitted by statute or the common law. More particularly, the statutory or common law authority on which an officer relies when using force must apply to the particular duty that the officer is carrying out. Unless an officer possesses such authority in any particular case, the use of force by the officer may be unlawful, and, accordingly, the officer could be liable for assault or other related offences as may be applicable.

2. THE USE OF FORCE BY POLICE IS GOVERNED BY THE PRINCIPLES OF NECESSITY, PROPORTIONALITY, & REASONABLENESS: Even when the use of force may be authorized to carry out a particular type of duty, a police officer does not possess an unrestricted right to use force. The lawful use of force by police is constrained by the principles of necessity, proportionality, and reasonableness. That is, an officer will be justified in using force in any particular case only if the harm sought to be prevented could not be prevented by less violent means, and that the injury or harm done by, or which might reasonably be anticipated from the force used, is not disproportionate to the injury or harm it is intended to prevent.

   In accordance with those principles, section 25(3) of the Criminal Code specifies that an officer is not justified in using lethal force (that is, force that is intended or is likely to cause death or grievous bodily harm) unless they believe on reasonable grounds that such force is necessary to avoid the death or grievous bodily harm of themself or a person under their protection.

3. THE MEANING OF "EXCESSIVE FORCE": An officer's use of force may be excessive if the officer did not have the authority to use force, or otherwise if it violates the principles of proportionality, necessity, and/or reasonableness. Under s. 26 of the Criminal Code, a police officer who uses force is "criminally responsible

for any excess ..." It bears emphasis that under the principle of "necessity", an officer may not use force if there are reasonable non-violent tactical options available to the officer, by which their lawful objective would likely be accomplished.

4.   THE IMPORTANCE OF DE-ESCALATION AS A TACTICAL OPTION: "De-escalation" is a term that refers to non-use-of-force tactical options that a police officer may use when confronting a violent or non-compliant individual. (This term is also sometimes used to refer to use-of-force options designed to obtain compliance on the part of a subject, but to avoid confusion the term should be restricted to non-use-of-force options. De-escalation techniques have the purpose of resolving or stabilizing a volatile situation without the use of force, or with a reduction in the amount of force that would otherwise be needed. De-escalation seeks to slow the dynamics of an encounter, thereby gaining time to allow for the arrival of further resources and tactical options which may further minimize or eliminate the need to use force. Generally speaking, de-escalation seeks to pacify a non-compliant individual by means of building personal rapport with the police officer.

Whether de-escalation may be effective or even feasible in any particular case will depend on an assessment of the circumstances at hand. Police are trained to assess, plan and act, based on existing circumstances, but also to reassess and adapt as circumstances evolve. Key considerations include, for example, the tactical options immediately available to police; whether further tactical options will be arriving at the scene; and the nature and degree of risk posed by the non-compliant individual. A situation may begin with de-escalation being a reasonable tactical option, but it can reverse in an instant.

In situations where it is feasible, de-escalation may be particularly effective in dealing with individuals who are in a state of crisis or suffering from an apparent mental illness. De-escalation may also be particularly effective when dealing with members of Indigenous and Black communities, as well as members of other marginalized or racialized communities; but the importance of de-escalation is not restricted to members of those communities.

There is no legal duty that requires an officer to employ de-escalation techniques in every case. However, an officer may not use force if there are non-violent tactical options available to the officer, by which the officer's lawful objective can reasonably and likely be accomplished.   Accordingly, in circumstances where an officer uses force when de-escalation is an objectively reasonable alternative, such use of force may be excessive.

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5. THE SCOPE OF AN OFFICER'S DISCRETION IN USING FORCE: Police officers possess a measure of reasonable discretion in determining whether force is required, and if so, to what degree. Police engage in dangerous work, and, on occasion, must act quickly in emergencies. Assessments regarding the use of force need not be based on a "standard of perfection", nor calibrated with the precession of a "jeweller's scales". Moreover, an officer is not required to use only the least amount of force which might achieve their objective. However, the use of force which objectively violates the principles of proportionality, necessity, and/or reasonableness, in light of the circumstances known to the officer at the time, may leave the officer liable for excessive force.

7.3 Appendix C: Disproportionality & Disparity Equations

See pages 47 to 48 of the ARDS

Link to Data Standards for the Identification and Monitoring of Systemic Racism

Link to Standard 29. Racial Disproportionality and Disparity Indices

7.4 Appendix D: Glossary of Terms

See pages 67 to 73 of the ARDS

Link to Data Standards for the Identification and Monitoring of Systemic Racism

Link to ARDS Glossary