Main findings of preliminary analysis of Street Check data 2005-2016

Background

The following is based on all HRP data related to street checks unloaded from the Versadex system from 2005-2016. In general terms, a street check is an instance where an officer or officers speaks to, or visually identifies (without speaking to), an individual or group of individuals in a public place to ascertain information about their activities. After a street check takes place, the officer records the event in the Versadex system, and the information gathered from the check is meant to inform an intelligence-led approach to policing. Each street check creates records about the street check as a whole, as well as about each individual person involved in the street check.

In turn, a single street check will produce in the Versadex system one 'detail' record relating to that street check, and as many 'entity' records as there are people being checked (for example, a street check involving five individuals will create one detail record and five entity records). Moreover, the same unique individual (or 'entity') may have multiple records in the overall street check dataset, if they are the subject of multiple street checks.

This creates essentially three main units of analysis through which the street check data can be examined, each of which answer slightly different questions about which groups and individuals are most involved in street checking activity, and in what ways. For clarity's sake, in the analysis in this document, the following terms will be used to describe the main units of analysis:

1. **Street check record:** This refers to the information related to a specific instance of checking, at a specific place and time, and may be linked to one or more entity records.
2. **Entity record:** This refers to the information related to a specific individual involved in a specific street check.
3. **Unique individual:** This refers to the information related to a specific individual who appears one or more times in an entity record in the overall dataset.

The following analysis examines data from 68,483 street check records for the period 2005-2016.[1] These street check records resulted in 98,551 entity records, representing 36,652 unique individuals. For context, this analysis also includes relevant data on General Occurrence (GO) reports that resulted in a charge for the same period. A GO report is a record that is created every time a call for service or incident generates a police response or action. Not all GOs involve a charge, however GOs involving a charge are primarily used in this context as a proxy for criminal activities within geographic areas and among demographic groups. The analysis also includes census data where appropriate.

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[1] There were actually 72,139 street check records over this period, however 68,483 of these street check records were linked to entity records, and only those checks with entity records are suitable for this analysis. The data for this analysis were unloaded in October 2016, so do not represent the full 2016 calendar year.

Findings

Below are the main findings, keeping in mind that the analysis is ongoing and there are many alternative approaches to processing this data that could result in somewhat different interpretations.

1. **The proportion of street check and entity records involving non-white populations was disproportionate to their representation in the municipal population.** For those entity records where the ethnicity of the individual was recorded,[2] 25.8% of entity records and 18.0% of unique individuals checked from 2005-2016 were identified by the officer as non-white,[3] compared to a municipal population that is 11.6% non-white as of the 2011 census. Black Haligonians were the most disproportionately over-represented in the data: 20.48% of entity records involved a person identified as black, and 11.08% of unique individuals in the dataset were black, compared to a 3.59% black population in the municipality.

   A smaller disproportionate over-representation was found in entity records involving Arab/West Asian Haligonians, where 2.29% of the entity records and 3.38% of the unique individuals involved a person identified as Arab/West Asian, compared to a 1.75% Arab/West Asian population in HRM. All other ethnicity categories (White, East/Southeast Asian, South Asian, and Aboriginal) were under-represented in the data, with East/Southeast and South Asian the most under-represented (0.64% of all entity records involved individuals from these groups, compared to their combined 3.12% representation in the HRM population). This is illustrated in the below table:

	2011 Census	Unique individuals	Entity records
ARAB / WEST ASIAN	1.75%	3.38%	2.29%
BLACK	3.59%	11.08%	20.48%
ABORIGINAL	2.49%	1.33%	1.72%
SOUTH ASIAN	1.04%	0.46%	0.22%
OTHER	0.67%	0.88%	0.67%
EAST /SOUTHEAST ASIAN	2.08%	0.87%	0.42%
WHITE	88.39%	81.99%	74.20%

   Census data identifies the whole municipal population rather than the specific population living within HRP's boundaries, so further analysis needs to be done to isolate the HRP jurisdictional population ethnicity characteristics. While both over- and under-representation in this data should be examined further, the preliminary analysis primarily focuses on black over-representation due to the size of this over-representation in the data, relative to other ethnic groups.

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[2] Ethnicity was recorded in 94,844 (96%) of 98,551 entity records.
[3] The Versadex system offers seven ethnicity categories as well as 'unknown'. The ethnicity category is selected from a drop-down menu by the officer, normally based on perception (rather than e.g. self-identification by the individual involved in the check).

2. **The majority of street checks appear to involve interpersonal contact**. 23.6% of entity records were classified as 'visual contact' checks which would involve seeing, but not speaking with, the individual being checked. This suggests that most (if not necessarily all)[4] of the remaining 76.4% of entity records involved some interaction with the individual, which suggests that street checks are predominantly intrusive activities across the data.

3. **Young people and males were statistically over-represented in the street check data, but reflect similar patterns in other crime data.** 77% of entity records involved males, who comprise just over 48% of the municipal population according to census data. 36% of entity records involved a person between 15-24 years old, compared to approximately 14% of the municipal population in that age range. These data mirror the GO data, which show that 32% of the GOs resulting in charge involved individuals between 15-24, and 71% involved males. People aged 25-39 were also statistically over-represented in the entity records, though to a lesser degree (32% compared to 21% in the population), and again roughly in line with the GO data (33% in that age range).

4. **A majority of street check records include people with a prior charge history.** Of the 68,483 street check records (i.e. records of incidents where one or more people were checked at a specific time and place), 61.8% (42,334) of these included at least one subject who had a prior charge at the time of the check. In turn, regression analyses suggest that past criminal behaviour appears to be an important predictor of being checked, within this dataset. However, it is also worth recognizing that most of the unique individuals in the dataset did not have prior charges. Of the 36,652 unique individuals that were subject of a street check between 2005-2016, 61.1% (22,377) had no prior charges at the time of their check. This discrepancy in proportions between street check records and unique entities is primarily due to unique entities with prior charge histories being subject to substantially higher numbers of checks.

5. **Of those unique individuals who were checked with no prior charge history, the level of over-representation of black entities was lower, but nonetheless present, when compared to the whole sample.** Of the 22,377 unique individuals who were subject of a street check but had no prior charge history, ethnicity was recorded for 21,437 of these. 84.8% (18,169) were white and 15.3% (3,286) were non-white, with 7.2% (1,545) black. This again is disproportionate with the ethnic proportions of the wider HRM population, if somewhat lower than the disproportionality in total number of entities checked shown at point 1 above.

6. **We do not know what proportion of street check records involve individuals with no prior charge history but some prior police contact or involvement.** We know that past charge history is an important predictor of the number of times an individual is checked within this dataset. However, a missing piece of analysis is the number of checks that are done with individuals who have prior police involvement but no prior charges (i.e. the

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[4] Other check categories, such as 'intelligence' check – which comprise 23.4% of checks – may include some checks that were visual rather than interactional in nature, though the exact proportion is not knowable from the data.

subject of an investigation or otherwise suspected of criminal activities), compared to the number of checks that arise from situation-based suspicion alone (i.e. where the subject of the check is not known by the officer, but circumstances may warrant a check being undertaken). The data sources that would be used to determine this have known quality issues and this analysis is therefore still ongoing. Preliminary analysis suggests that a majority of unique individuals in the dataset have multiple previous contacts with police at the time of their street check, but the exact proportion is not known at present.

7. **There is a statistically significant ethnicity effect in the early analysis, though further analysis is required.** Using regression models examining prior charge data as well as ethnicity, prior charges had the stronger explanatory value in terms of determining the number of checks a person may experience – in other words, people who had a higher number of prior charges were more likely to be checked more often, regardless of ethnicity. Ethnicity nonetheless showed a small to moderate, but statistically significant, effect on checking once prior charges were controlled for – in other words, being black did appear to increase the number of checks a unique individual within this dataset could be subjected to, although the exact size of the effect is uncertain.[5] Further analysis of the effects of neighbourhood characteristics (e.g. crime rates, calls for service, demographic and socioeconomic data) on checking patterns is ongoing, and may modify our understanding of the effect of ethnicity on how often a person gets checked.

8. **Certain locations generate a much higher number of street check and entity records, but this is generally in line with crime data in those areas.** Looking at street check and entity records in conjunction with GO data, the most records are generated in the areas where there are also the most GOs resulting in charge, and these are also urban areas where there is a higher patrol presence. Analysis related to entity records in HRP's policing zones vs. prevalence of charged GOs in those zones do suggest a disproportionate amount of checks taking place in certain areas (such as C4, E3, E5, and most of the HW zone), in which there are a substantially higher proportion of overall checks than would be predicted by the level of charged crime. However, relative to the ethnicity of charged entities in each of those zones, the disproportionality faced by black entities in those zones is in line with the overall disproportionality of checking levels in those zones. Again, a more comprehensive analysis of neighbourhood effects on checking is ongoing and may modify this finding.

9. **The disproportionality in the data for black Haligonians reflects wider CJS disproportionality.** While it is does not necessarily or entirely explain the disproportionality found in street check data, black people are over-represented throughout the Nova Scotia criminal justice system (CJS) at levels similar to those found in this data. For example, 17% of HRP GOs resulting in charge and 11.1% of entities charged from 2005-2016 involved entities identified as black, and 14% of adults (and 16% of youths) in NS prisons are also

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[5] Depending on the model used, ethnicity explained between 0.3% and 13% of the variance between groups – though a more complex model is required and will be analyzed once additional data has been prepared.

black.[6] Understanding the degree to which this disproportionality is caused by the CJS (rather than for example wider social factors such as inequality of opportunity and access to resources) would require knowing the base rates of actual (detected and undetected) offending behaviour among different ethnic populations, however this data is not available in Nova Scotia.

10. **Whether or not the checking patterns are explained by factors other than ethnicity, we cannot reject the possibility that street checks contribute to systemic bias.** The data suggests that street checking activity is focused predominantly on entities with prior charges, and in neighbourhoods where crime is comparatively higher. Ethnicity and age also appear to play a role in the patterns observed. Perhaps more importantly, the data do leave open the possibility of a self-reinforcing cycle - i.e., once a person is known to the police, they are increasingly at risk for further contact with police, creating a 'ratchet effect' that occurs through a focus on the 'usual suspects' that could disproportionately disadvantage those with prior police contact and inhibit desistance from crime.[7] The presence of such a cycle could be tested through further analysis of entity contact data, however would be a substantial statistical undertaking.

11. **The effectiveness of street checks and patterns of street checking could be usefully investigated further.** The analysis highlighted a number of questions about the effects and effectiveness of street checking in more general terms – that is, whether and to what degree street checks further HRP's operational mission in terms of solving, reducing and preventing crime and improving safety. Future research could test patterns of street checking against patterns of offending to see what effect street checks may have had on crime, and whether it has a differential effect on different kinds of offenses and offenders.

Overall, it is clear that black people, Arab/West Asian people, young people and males are over-represented in street check data within all three units of analysis (street check records, entity records and unique individuals). The multiple contributory causes to this over-representation may include but are not limited to individual behaviour; neighbourhood characteristics such as density, demographics and socioeconomic characteristics; and routine police activities and deployment patterns. The interplay of these factors requires further exploration to understand the degree to which street checking activities are symptoms and/or causes of over-representation in police data as well as potentially over-representation in the wider CJS. Without question, the underlying causes of any over-representation – and particularly black over-representation in this case – in the CJS remain a concern, and the impacts of police practices such as street checking – both positive (in terms of

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[6] Data on black representation in NS prisons are drawn from: http://www.cbc.ca/news/canada/nova-scotia/black-indigenous-prisoners-nova-scotia-jails-1.3591535

[7] Bernard Harcourt from Columbia University argues that the 'ratchet effect' occurs where disproportionate attention from the criminal justice system – even where statistically justified (e.g. by focusing on those with the highest level of previous offending behaviour) – has a self-reinforcing detrimental effect on life-chances for offenders and potentially also on wider perceptions of legitimacy of the criminal justice system within the communities where police officers focus their attention. The concept of the 'usual suspects' has appeared in a range of criminological research, and generally refers to an over-emphasis in routine practice on 'known' entities that reinforces their representation in police statistics.

potentially reducing crime) and negative (in terms of impacts on the subjects of checks and their communities) – need further exploration.

As indicated at the beginning of this document, this is a preliminary analysis which raises many additional questions, and so any conclusions at this stage are provisional. Nonetheless, I am available to discuss these findings as needed.

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