

**TEXTG 4 HELP:
AN EVALUATION OF METRO VANCOUVER TRANSIT POLICE'S
SMS TEXTING PROGRAM**

By

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Abstract

In 2013, the Metro Vancouver Transit Police implemented a SMS texting program named Chatterbox that allows the public to report concerns about social disorder and criminal offences on or near the transit system. Using individual interviews with dispatchers, focus groups with police officers, an online survey with Chatterbox users, and an analysis of Transit statistics, the purpose, process, and use of the program was reviewed. Overall, Chatterbox has provided transit users with an alternative and discrete method of contacting the police to investigate a variety of criminal offences ranging from minor delinquent incidents to major criminal acts. The conversion of Chatterbox conversations to police files was 72% and reporting of criminal offences through Chatterbox accounted for 10% of the agency's police files. Recommendations for future considerations include the ability to send multi-media files, such as photos and video, implementation of a dedicated dispatcher and police officer to answer and review Chatterbox conversations, and the deployment of a public feedback mechanism.

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Dedication

To Mom and the “boys”.

And for Dad...for all the things you missed.

Table of Contents

Abstract	iii
Acknowledgements	iv
List of Tables	vii
List of Figures	viii
Chapter 1: Introduction	1
1.1 Transit Police	2
Chapter 2: Literature Review	5
2.1 Crime on Transit Systems	5
2.2 Victim Reporting	7
2.3 Uses of SMS Texting	10
2.4 Routine Activity Theory and the Bystander Effect	14
Chapter 3: Sample and Methods	19
3.1 Chatterbox	19
3.2 Research Ethics and Informed Consent	22
3.3 Research Method: Survey with Users of Chatterbox	23
3.4 Research Method: Data Analysis of Chatterbox Calls	24
3.5 Research Method: Interviews with Dispatchers	26
3.6 Research Method: Focus Groups with Transit Police Officers	29
Chapter 4: Findings	33
4.1 What the Public Says about Chatterbox	33
4.2 Data Analysis of Chatterbox Calls	47
4.3 What Dispatchers Say	63
4.4 What Police Officers Say	70
4.5 Summary of Research Findings	76
Chapter 5: Recommendations	81
5.1 Education and Training	81
5.2 Advertising and Marketing	82
5.3 Revised Canned Comments	83
5.4 Multimedia Submissions	84
5.5 Dedicated Dispatcher and Police Officer	85
5.6 Additional Public Feedback	86
Chapter 6: Conclusion	88
6.1 Limitations	88
6.2 Future Research Directions	90
Appendices	95
References	117

List of Tables

Table 1. Number of Journeys and Boardings for 2000-2015.....	4
Table 2. Total Number of Chatterbox Conversations: May 2014 to December 2014.....	49
Table 3. Chatterbox Police Files Versus Boardings: 2015	54
Table 4. Top 10% Calls Reported Via Chatterbox: January 2014 to December 2016	61
Table 5. Reporting of Sexual Assaults.....	62

List of Figures

Figure 1. Number of Times Chatterbox was Used in the Past 12 Months (n = 138).....	35
Figure 2. Percentage of Incidents Reported (n = 149).....	36
Figure 3. Percentage of Alternative Methods of Reporting Incident (n = 270).....	37
Figure 4. Percentage of Reasons for Using Chatterbox (n = 149).....	38
Figure 5. Method of Learning about Chatterbox (n = 148)	44
Figure 6. Reasons for Using Chatterbox in the Future (n = 173)	45
Figure 7. Conversion of Conversations to Police Files: May 2014 to November 2015 ...	48
Figure 8. Police Files by Month: January to December 2014	50
Figure 9. Police Files by Month: January to December 2015	50
Figure 10. Police Files by Month: January to December 2016.....	51
Figure 11. Police Files by Month by Line: January to December 2014	52
Figure 12. Police Files by Month by Line: January to December 2015	53
Figure 13. Police Files by Month: January to December 2016.....	54
Figure 14. Percentage Breakdown by Line: January 2014 to December 2016.....	55
Figure 15. Call by Day of Week: January 2014 to December 2016	56
Figure 16. Police Files by 24 Hour Period: January 2014 to December 2016.....	57
Figure 17. Police Files by 24 Hour Period by Line: January 2014 to December 2016	58
Figure 18. Police Files by Call Type: January 2014 to December 2016	59
Figure 19. Top 10 Call Type by Line: January 2014 to December 2016	60
Figure 20. File Breakdown by City: January 2014 to December 2016	62

Chapter 1: Introduction

It was a few minutes past midnight on a Wednesday morning in April 2015 when the Operations Communication Centre (OCC) at the Metro Vancouver Transit Police (“Transit Police”) received a Short Messaging Service (SMS) text – *“Going commercial between Renfrew and commervial(sp) guy holding knife drunk. Plz send someone”*. A male in the early throes of a drug induced psychosis was on the SkyTrain (Vancouver’s light rail system) and was threatening passengers with a knife. Transit Police officers intercepted the SkyTrain at VCC-Clark Station in Vancouver, and it took three members to subdue the person. The male was then transported to Vancouver General Hospital and sedated by medical personnel.

This type of crime reporting was made possible by Transit Police’s SMS texting program called Chatterbox. In 2013, Transit Police implemented a SMS texting program that allowed passengers to send text messages to Transit Police to report social disorder and criminal offences on the Metro Vancouver transit system. The focus of the following thesis is to evaluate the effectiveness of Chatterbox as a reporting alternative to dialing 9-1-1 or calling police on the non-emergency line. The data that formed the basis of this evaluation were one-on-one interviews with dispatchers, focus groups with Transit Police officers, posting an online survey for users of Chatterbox to complete, and statistics related to Chatterbox calls for service and police attendance.

1.1 Transit Police

In 1985, 15 members of the British Columbia Transit were appointed as Special Provincial Constables to patrol the newly operational SkyTrain. These members did not carry firearms, but had the ability to arrest offenders on transit property, and were able to write and serve violation tickets. During the 1990's, the Special Provincial Constables were given access to law enforcement databases, yet were still unable to respond to criminal offences that occurred beyond designated transit property. Due to the increased ridership on the transit system, the governing organization of transit systems in Vancouver and its surrounding areas, TransLink, applied to have the group of Special Constables transition to a fully functional police agency. In 2005, the Greater Vancouver Transportation Authority Police Service was born (Transit Police, 2016).

Today, the Greater Vancouver Transportation Authority Police Service has been redefined as the Metro Vancouver Transit Police, and is now known as the Transit Police. The Transit Police is the only Canadian police force designated to investigate criminal activity on the transit system and its surrounding area. The law enforcement agency polices 134 kilometers of light rail systems, 57 stations, 200 bus routes, and one passenger ferry route. This includes four light rail systems (the Canada Line, the Expo Line, the Millennium Line, and the Evergreen Line), the Westcoast Express (a commuter train that runs from Mission to Vancouver), the SeaBus (a ferry that transports passengers from Lonsdale Quay in North Vancouver to Waterfront Station in Vancouver), and bus routes from Langley to North Vancouver (Transit Police, 2016).

The Transit Police employs 167 sworn police officers and 67 civilians. There are several specialty units that work within the department. The police service has four bomb detection dog teams that actively patrol the transit system. In 2016, Transit Police developed the community officer position program with individual police officers working in high volume areas to promote a focus on community interaction (Transit Police, 2016).

Metro Vancouver has experienced rapid growth in terms of the number of residents re-locating to the area. In 2011, it was estimated that 2,373,037 individuals lived in the Metro Vancouver area. This increased to 2,542,469 in 2016, and it is projected that the area will be home to 2,690,062 residents by 2020 (B.C. Stats, 2016). City planners have calculated the region will grow to 3.5 million people by 2045 (B.C. Stats, 2016).

TransLink, the Transit Police's employer, has also experienced growth, in terms of the number of passengers using transit to move around in the Metro Vancouver area. As seen in Table 1, travel on transit between 2000 and 2015 increased by 84% for single transit trips (journeys) and 58% for passengers boarding various modes of transit (boardings) (TransLink, 2016).

Table 1. Number of Journeys and Boardings for 2000-2015

Journeys	2000		2015		Difference
Bus	98,597,000	76%	152,710,400	64%	55%
SeaBus	2,864,200	2%	3,406,500	1%	19%
SkyTrain	25,928,200	20%	49,897,500	21%	92%
Canada Line	-	0%	29,453,800	12%	-
West Coast Express	1,734,000	1%	2,119,000	1%	22%
Total Journeys	129,123,400	100%	237,587,300	100%	84%
Boardings	2000		2015		Difference
Bus	176,005,200	77%	235,615,200	65%	34%
SeaBus	5,472,000	2%	6,091,800	2%	11%
SkyTrain	46,296,300	20%	77,592,600	21%	68%
Canada Line	-	0%	40,972,300	11%	-
West Coast Express	1,926,600	1%	2,648,800	1%	37%
Total Boardings	229,700,100	100%	362,920,800	100%	58%

Current research has been minimal on existing SMS texting programs deployed for the use of reporting criminal offences and social disorder. Still, the next chapter of this thesis will provide a literature review that focuses on three key areas; the relationship between transit systems and crime rates, the reporting of crime, and existing uses of SMS texting programs.

Chapter 2: Literature Review

2.1 Crime on Transit Systems

Crime on transit systems and surrounding areas is not a new phenomenon. There is a body of research supporting the view that the introduction of transit systems to a jurisdiction can have a negative effect on the rates of certain criminal offences such as property crimes related to vehicles and robberies (Block & Davis, 1996; Gallison, 2012; Gallison & Andresen, 2017; Phillips & Sandler, 2015; Yu, 2011). This chapter examines the research on crime on transit, not only from a Lower Mainland perspective, but nationally and internationally.

Jordana Gallison (2012) studied whether the concerns of local community leaders about the level of crime rates increasing with the opening of the Canada Line in Richmond, British Columbia, was valid. Using statistics from the Richmond Royal Canadian Mounted Police (R.C.M.P.) and from the Transit Police, Gallison analysed criminal offence statistics from January 2006 to August 2011. Police Records Information Management Environment (PRIME) data were gathered from all seven Canada Line stations located in the city of Richmond (Aberdeen, Bridgeport, Lansdowne, Richmond-Brighouse, Sea Island, Templeton, and YVR-Airport) and a 250-meter buffer surrounding each station (Gallison, 2012).

The study categorized offences into three separate types of crime - violent crime, property crime, and other criminal code offences. This resulted in 851 incidents of violent crime, 6,538 cases of property crime, and 1,997 files of other criminal code offences. A time series analysis was conducted to evaluate all three offence types. Overall, violent

crimes increased at all stations, while property crimes increased at several stations, including the Aberdeen and Bridgeport Stations. One of the explanations for the increased property crimes at Bridgeport was that the station was adjoined to a popular casino. It was believed that with hundreds of individuals parking their vehicles near the casino, this would provide criminals with a target-rich environment (Gallison, 2012).

In the province of Ontario, a study was conducted on Ottawa's O-Train system to examine the effects of a light-rail system on crime rates in surrounding neighborhoods. Using 2006 crime statistics on theft of vehicles, robbery, and commercial burglary offences provided by the Ottawa Police Service, geo-spatial techniques were used to analyse the effect of the transportation system. This study concluded that the placement of O-Train stations had an effect on increased incidents of theft of vehicles, but not on commercial burglary and robbery (Gallison & Andresen, 2017).

In Washington, DC, the closure of rail stations due to maintenance allowed researchers to probe the impact of public transit on crime rates. The researchers concluded that there was significant evidence that the closing of one station had the effect of reducing crime by 5% on the transit line and by 2% on the overall transit system. It was concluded that the reduction in crime was driven by changes in offender and victim behavior. More specifically, most of the decrease in crime was attributed to offences related to theft from automobiles, which was the result of fewer passengers using the "park and ride" centers that provided offenders with many opportunities for crime (Phillips & Sandler, 2015).

In 1996, Block and Davis published a study on the relationship between transit and street robberies in four districts of Chicago, Illinois. In two of the districts, 39% of street

robberies occurred within 1,000 feet of a transit station. The researchers believed that the “number of street robberies peaked a short distance away from the station, where enough potential targets would still have been on the street, but guardianship would have declined” (1996: 251). It was concluded that robberies were less likely to occur during peak travel times due to the number of prospective witnesses and police officers patrolling in the area (Block & Davis, 1996).

Researchers also found that there was a strong correlation between bus routes and violent crimes. In the city of Cincinnati, Ohio, one study concluded that the number of robberies decreased as the distance from bus stops increased due to the concentration of commercial buildings and residences along transit routes (Qin & Liu, 2015). In fact, 95% of robberies occurred within 400 meters of a bus stop (Qin & Liu, 2015). It was established that the sparser an area, the less likely there would be bus stops and, thus fewer opportunities for robberies to occur. Part of the problem attributed to crime near bus routes was the bus stops were typically located in areas that “house business establishments that attract offenders and non-offenders alike” (Yu, 2011, p. 4).

2.2 Victim Reporting

Crime not only affects the immediate victim, but their families, communities, and society at large. To study crime reporting, Statistics Canada collects statistics from police organizations across Canada and conducts the General Social Survey (GSS) every five years, which includes information about victimization. The survey asks Canadian adults to self-report victimization on eight different crime types, including sexual assault, robbery, and physical assault. Based on the results of the 2014 survey, approximately 5.6 million

Canadians had been the victim of crime in the past 12 months (Perreault, 2015). While a total of 6.4 million criminal incidents were recorded by the survey at rate of 1,801 incidents per 10,000 individuals, the number of police reported incidents for 2014 was only 1.8 million or 506 incidents per 10,000 individuals (Perreault, 2015; Boyce, 2015). Survey participants reported violent crimes, such as sexual assault, robbery, and physical assault, 2.2 million times, for a rate of 619 incidents per 10,000 individuals (Perreault, 2015). This was significantly more compared to the police having documented 369,359 incidents of violent crime or 103 incidents per 10,000 individuals (Boyce, 2015). Sexual assaults reported by Canadians in the victimization survey occurred at a rate of 178 incidents per 10,000 individuals, while the number of sexual assaults reported to police was only seven incidents per 10,000 individuals (Perreault, 2015; Boyce, 2015).

One of the areas that Statistics Canada evaluates is the reporting of crime to the police and what percentage of incidents are never reported to the police. According to the information collected in the 2014 survey, less than one-third of all criminal offences (31 per cent) were reported to the police. Only 21% of crimes were reported by the victim themselves, while another 10% were reported to the police by a third party. Analysts concluded that, in general, the more serious a criminal offence, the more likely the incident is to be reported to the police. The only exception to this assumption was sexual assault. Even though sexual assaults were the most serious offence in the survey, only 5% of all sexual assaults were reported to the police. The most significant reason attributed to this low statistic of reporting was because most victims felt that the incident was a private or personal matter (Perreault, 2015).

When considering all crime types, the most common reason for not reporting a criminal offence was that the victim did not feel that the incident was serious enough to notify the police (Perreault, 2015). This was particularly true of less violent crimes, such as thefts and vandalism. For more serious offences, the most common reason for not contacting the police was that victims did not want to deal with the police. Other reasons included the belief among victims that the offender would not receive adequate punishment (38 per cent), the police would be ineffective (34 per cent), the victim feared the court process or did not want to deal with the judicial system (25 per cent), and the victim had received unsatisfactory service from the police in the past (17 per cent) (Perreault, 2015).

There is conflicting data on whether trends for victim reporting have increased or decreased in recent years. In the Statistics Canada victimization survey, overall rates of reporting crime to the police decreased 6% from 37% of households reporting a crime in 1999 to 31% of individuals reporting a crime to the police in 2014 (Perreault, 2015). However, in a longevity study regarding the trends of crime reporting between 1973 and 2005 in the United States, researchers found that reporting percentages of certain crimes, such as sexual assaults, had increased over time (Baumer & Lauritsen, 2010).

In addition to sex offences, victims of property crimes, such as burglary and motor vehicle thefts, were more likely to report crimes, despite decreased crime rates. Some of the reasons attributed to increased police notification were “increasing adoption of community policing, legislation and social movements concerning the rights of victims, the accelerating decline in interpersonal trust, growing ethnic diversity and rising inequality, the improvements in how the public view the police, and the proliferation of 911 systems

and cell phones might have been instrumental for stimulating an increase in police notification for these incidents” (Baumer & Lauritsen, 2010, p. 174).

There are very few studies that focus on the victimization of transit users. In a comprehensive study conducted on 1,088 households in Los Angeles, California, researchers from the University of California examined the rates of unreported crime associated to use of the Los Angeles bus system. Based on the survey results, it was calculated that there were approximately 23,000 bus and bus-related crimes in 1983. Compared to the crime statistics for the entire transit system, the number of criminal offences linked to transit use was an estimated 30 times more than the reported statistic. The researchers believed that not only were victims not reporting crime, but that the responding police agencies were improperly categorizing the offence as a non-transit event or failed to respond to the crime even when reported (Levine & Wachs, 1986).

2.3 Uses of SMS Texting

On December 3, 1992, the first SMS text message was sent by a British communications engineer wishing his friend a “Merry Christmas”. Phone manufacturers quickly began developing cell phones that allowed for texting capabilities. The texting phenomenon resonated with college and university aged students, and, by 2002, more than 250 billion text messages were sent worldwide. The use of text messages increased at a steady pace, by-passing the number of phone calls made. In 2011, 7.4 trillion text messages were sent worldwide (Gayomali, 2012).

The concept of text messaging involves the user sending a message with a maximum of 160 characters. While the actual limit is 960 characters, if the text is longer

than 160 characters, it is broken up into a series of messages of 160 characters. When a text message is sent by a cell phone to another user, the text message travels on a pathway or control channel to a local cell tower. From there, the text message travels to its destination along the network. The receiving cell phone must be turned on to accept the text message. Texting is viewed by many as being more convenient than sending email and more discreet than a phone conversation. The deaf and hearing-impaired community increasingly uses this method to communicate with each other and others (Hord, 2005).

One field that has embraced the use of SMS texting is the medical and healthcare sector. A medical school in the United Kingdom introduced a trial program to help second year students adjust to their practicums. The program allowed students to maintain contact with faculty members through text messages in attempts to decrease feelings of isolation (Young et al., 2009). Even doctors on call have capitalized on the ability to send text messages and pictures of their patients to senior medical personnel to request assistance on diagnoses (Matharu, Hale, Ammar, & Brennan, 2016). During one study, over 50% of doctors admitted to routinely sending text messages to “to update colleagues on patients’ progress and give information about times of ward rounds and meetings” (Matharu, Hale, Ammar, & Brennan, 2016, p. 863).

Texting has also become more popular among dispatch centres coordinating emergency response. The emergency dispatch centre for Metro Vancouver, E-Comm, provides the first line of defense when the public dials 9-1-1. The operator will ask several questions of the caller to figure out the type of services needed (fire, police, or ambulance) and the municipality the complainant is calling from. The operator will then connect the

caller to the proper agency and stay on the line with the caller until the call is transferred to the next agency, which is still on a separate dispatch system. Of note, for 35 police and fire agencies, E-Comm provides in-house dispatching services that connect directly with emergency personnel (E-Comm, 2017).

E-Comm offers a texting service for the deaf/deaf-blind, hard of hearing, and speech impaired community. However, the user needs to pre-register his or her cell phone with their cell phone provider and ensure that the cell phone can make voice calls and send/receive text messages. The individual is still required to dial 9-1-1 to establish a voice connection and wait for the dispatcher to send a text message before responding. This can take up to 60 seconds before the user receives a text message from the operator (E-Comm, 2017).

One challenge of this specific program is that the service is not available in all regions of British Columbia. Another concern is that the user needs to wait for the operator to send a text message to activate the conversation. It is recommended that if the user does not receive a text message after a few minutes, the individual should end the call and try again or seek help from someone else (E-Comm, n.d.). The number of calls received using this program was extremely small as only 32 calls were received between January and April 2017 (E-Comm, 2017).

It appears that the use of SMS texting for personal safety and crime reporting is starting to be slowly implemented in various areas. In 2015, the British Transport Police commissioned a report that consulted the public on the level of safety felt by passengers. One of the areas that respondents were asked to provide feedback was on the British

Transport Police's texting program for reporting non-emergency incidents. Out of the 5,646 responses, 66.3% (n = 3,741) individuals were not aware of the texting program. Some of the feedback from the participants included support for the texting service and increased promotion of the program by the police agency. The study concluded that the "[k]nowledge of the 61016 text service can also help increase the public's feelings of safety on the railway by making them feel more able to report undesirable behaviours and lower level disorderly behavior" (British Transport Police, 2015, p. 37).

Other organizations have capitalized on the texting habits of the public to report disorder. One of the largest public venues in Vancouver, Rogers Arena, provides its guests with the ability to report inappropriate behaviour. Using the number 6-9-0-5-0, ticket holders can connect directly with arena employees and text their concerns without fear of retaliation from other fans. The facility requests that texters give their seating location followed by the individual's question or comment (Rogers Arena, 2017).

In recent years, as result of a number of active shooters and violent encounters in the United States, the safety of students on post-secondary campuses has become a primary concern to school officials. Yabe (2016) studied the willingness to pay for emergency texting to 9-1-1 for three separate groups that included students, faculty, and staff employees. It was calculated that the sum of all three groups' willingness to pay was \$7,736 US per year, which was larger than the actual cost to implement such a program (Yabe, 2016).

To date, SMS text messages have demonstrated that a mere 160 characters can provide security and safety to users (Costello, 2017; Yabe, 2016; E-Comm, 2017; Rogers

Arena, 2017). Previous research has shown that the general public has placed such a high value on the ability to text for help in the face of danger that they are willing to pay for comparable services (Yabe, 2016). The British Transport Police confirmed that even knowing that such programs are available increased the public's sense of security (British Transport Police, 2015).

Yet presently, there is little research conducted on the feasibility of reporting crime using a SMS texting mechanism. Given this, the following thesis evaluates the use of a SMS texting program as a method for the public to report criminal activity and social disorder to the police while on or near transit. It is important to demonstrate that an alternative method to calling 9-1-1 should encourage reluctant complaints to more readily contact the police to report criminal incidents on the transit system.

2.4 Routine Activity Theory and the Bystander Effect

Routine activity theory argues that three separate elements must come together to create an opportunity for a crime to occur - a motivated individual, an available victim, and the absence of a suitable guardian to prevent the crime (Cohen & Felson, 1979). Cohen and Felson stated that the "lack of any of these elements is sufficient to prevent the successful completion of a direct-contact predatory crime, and the convergence in time and space of suitable targets and the absence of capable guardians may even lead to large increases in crime rates without necessarily requiring any increase in the structural conditions that motivate individuals to engage in crime" (1979, p. 589).

As it applies to crime on transit, passengers may place themselves in a position to become unintended victims of crime as they converge at transit stations and bus stops.

While waiting for a bus or train, individuals are reduced to stationary targets for offenders. Many passengers will also leave their vehicles unattended for long periods of time while using transit to travel to work, which also increases the opportunity for crime. Although there are often a lot of other people either at or on transit who could serve as capable guardians, it is also common for transit users to not pay too much attention to the other people around them or to not want to get involved in incidents on or near transit (Qin & Liu, 2015). One of the functions of the Transit Police is to patrol a group of stations and therefore, moving between stations and transit cars reduces their capacity to serve as guardians (Transit Police, 2017).

An example of the lack of willingness of bystanders to get involved when a criminal offence is being committed was the well-known Genovese murder in New York. In March 1964, 28-year-old Catherine “Kitty” Genovese was walking home in the early morning hours when Winston Moseley began stalking her. For over 30 minutes, Genovese screamed for help in her middle-income neighbourhood in Queens, while Moseley stabbed her multiple times before Genovese died on the steps of her building. During the murder investigation, it was determined that 38 citizens witnessed the homicide, but did little to intervene (Gansberg, 1964). This quickly became coined as the “bystander apathy”, or better known as the “bystander effect” (Darley & Latane, 1968).

In studies generated after the Genovese murder, researchers found that, when faced with an emergency, bystanders experience an internal turmoil about whether to intervene (Darley & Latane, 1968). Researchers Darley and Latane (1968) described this conflict as “avoidance-avoidance”, where “[o]n the one hand, subjects worried about the guilt and

shame they would feel if they did not help the person in distress. On the other hand, they were concerned not to make fools of themselves by overreacting” (para. 39).

There were several factors that effected the reporting of an emergency during the study. The researchers noted that the larger the crowd of individuals near the incident, the less likely a bystander was to report the emergency and the greater amount of time that would elapse before the emergency was reported. But the element that seemed to have the greatest effect on reporting an emergency was the introduction of an emergency service person, such as a police officer or a medical official, in the immediate area. Of note, when a paramedic participant appeared at the scene, all subject bystanders reported the emergency and the delay in reporting was the shortest of all the samples (Darley & Latane, 1968).

Latane and Darley (1968) conducted a second research project that documented the reactions of various bystanders when introduced to a smoke-filled room. Individuals acting alone were significantly quicker to report the incident compared to the larger groups. When the participants were placed alone with passive actors, only 10% reported the smoke in the room. Latane and Darley anticipated that:

When faced with such an event, we suggest, the individual bystander is likely to look at the reactions of people around him and be powerfully influenced by them. It was predicted that the sight of other, nonresponsive bystanders would lead the individual to interpret the emergency as not serious, and consequently lead him not to act. Further, it was predicted that the dynamics of the interaction process would lead each of a group of naive onlookers to be misled by the apparent inaction of the others into adopting a nonemergency interpretation of the event and a passive role (1968, p. 220).

Latane and Darley concluded that the experiment was consistent with their predictions. Yet, they provided several alternative explanations as to why participants reacted how they did during the study including the idea of safety in numbers and that a large group of people present during the event allowed participants to defuse their fear. Another proposed theory was that the individuals had attempted to demonstrate a sense of bravery in the face of danger. The concept of portraying macho stoicism while others are nearby was considered a socially acceptable norm by the researchers, especially for adult males (Latane & Darley, 1968). It was assumed that “[i]t was possible that subjects in the group condition saw themselves as engaged in a game of "Chicken," and thus did not react” (Latane & Darley, 1968, p. 220).

Based on the initial 1968 study conducted by Darley and Latane, it would make sense to have emergency personnel, including police officers, stationed at all depots along the transit system in the Metro Vancouver area. This would ensure that all emergencies, such as criminal offences and social disorder, would be reported in a timely manner. However, this would not be economically feasible based on the extensive coverage that includes patrolling 21 different communities (Transit Police, 2017). Presently, patrol duties by officers are facilitated by travelling between various stations within a designated zone (Transit Police, 2017).

Given that police officers cannot realistically be at every bus stop or transit station, congregations of passengers waiting for transit provides the perfect target-rich environment for offenders to commit crimes, such as theft, robbery, and sexual assaults. Based on the studies conducted by Latane and Darley, it could be concluded that even if there was a

medical emergency or a crime in progress witnessed by transit passengers, there may not be anyone who contacts the authorities for fear of “losing face” or appearing panicked in front of others. The concept of using SMS texting to report crime and social disorder provides bystanders with a viable alternative as a discrete method of contacting the Transit Police without outwardly reacting in front of others and, therefore, maintaining a non-committal and brave exterior.

Chapter 3: Sample and Methods

The research for this thesis evaluates Chatterbox as a reporting tool in assisting Transit Police with engaging transit passengers and allowing them to report social disorder and criminal offences on the transit system. The evaluation on Chatterbox was completed by conducting several research methods including hosting an online survey for users of Chatterbox, completing individual interviews with Transit Police dispatchers, carrying out focus group interviews with Transit Police officers, and analysing statistics stored in PRIME and Chatterbox.

3.1 Chatterbox

On May 1, 2013, a local municipal police department, the Abbotsford Police Department, launched a SMS texting program named Chatterbox. The purpose for implementing the program was “to leverage technology to communicate and engage [the] community” (Slide 2, APD, 2013). Within the first six weeks of the program’s introduction, the Abbotsford Police Department received 105 conversations (text dialogue between a complainant and an Abbotsford Police Department employee). Just over one-quarter of those conversations were converted to police files that were assigned to police officers to investigate various offences including motor vehicle act incidents, break and enter circumstances, and suspicious person calls (APD, 2013).

Transit Police became interested in introducing a similar application after several employees saw the Abbotsford Police Department’s presentation on Chatterbox at a 2013 British Columbia Associations of Chiefs of Police conference. At the time, Transit Police

was concerned about promoting engagement with passengers and community involvement. After consultation with senior management, the two agencies began working together to develop the Chatterbox program for Transit Police. Abbotsford Police Department provided technological support, software, and training to the employees of Transit Police. In December 2013, Transit Police launched Chatterbox for use on the transit system with little fanfare (L. Talbot, personal conversation, January 27, 2016).

Generally, when a text user sends a text message, the text message is forwarded to an aggregator. An aggregator works as an intermediary with various wireless service providers to allow the infrastructure to “talk” to each wireless carrier (usshortcodedirectory, 2017). The aggregator program then sends the message to the end user. Transit Police considered a number of companies to provide additional aggregator services, including several American companies. However, due to concerns with privacy implications due to the *USA Patriot Act*, a Canadian company, Impact Mobile Incorporated, located in Toronto, Ontario were selected (L. Talbot, personal conversation, January 27, 2016).

One of the issues with implementing the program was the choice of the phone number as it needed to be easy for users to remember. Initially, a four-digit number was asked for, but the Transit Police were informed that such numbers were exclusively assigned to businesses. Several other numbers were put forward before 8-7-7-7-7-7 was selected. The numbers were chosen based on the Transit Police’s “See Something, Say Something” initiative, a program designed to combat the increase of occurrences involving

sexual harassment and sexual assaults on female passengers on the transit system (L. Talbot, personal conversation, January 27, 2016).

In October 2013, two Simon Fraser University students launched an online website to capture the comments and postings from females who had experienced unwanted sexual attention and sexual touching from male passengers while riding on transit (Hui, 2013). Within the first few weeks, many postings were added to the website, describing sexual harassment and physical intimidation. One anonymous submission described an unknown male who made verbal sexual threats to a female during a ride on the SeaBus (Nordgren, 2013, as cited in Hui, 2013). In the following months, several sexual assault incidents gained notoriety in the media, and there was increased pressure from both the media and various advocacy groups on the Transit Police to provide more security to passengers. To counteract the increased numbers of reported sexual assaults, Transit Police began to promote several practices and strategies, including the use of Chatterbox to report offensive behaviour (Brunoro, 2014).

The program was “soft-launched” on December 3, 2013. The idea of the “soft-launch” was to slowly roll out the program to test Chatterbox and iron out the wrinkles and test the platform. As the program moved from its infancy stage, the Transit Police and Translink began advertising the program over the early months of 2014. Transit Police officers were notified of the program through the appearance of marketing paraphernalia distributed throughout the Transit Police offices (L. Talbot, personal conversation, January 27, 2016).

The Chatterbox program falls under the responsibility of the Transit Police's Operations Communication Centre (OCC). The OCC provides analytical reports to senior management, including a daily log of the conversations received by the OCC. Chatterbox conversations that are converted into police files are differentiated from other types of police calls in the Computer Aided Dispatch (CAD) program by the notation of *SMS* in the remarks field (N. Applejohn, personal conversation, January 29, 2016).

3.2 Research Ethics and Informed Consent

Although the research on SMS texting as a reporting function to the police does not involve significant sensitivity, some participants may feel negatively affected by having to recall the nature of the call that resulted in their use of the Chatterbox program.

Additionally, to ensure that police officers and dispatchers felt comfortable providing accurate information about how they felt about the program, ethics approval was obtained from the University of Fraser Valley's Human Research Ethics Board prior to collecting any data for this study.

Given this, each participant in the focus groups and the interviews was provided with a written consent letter (see Appendix A for consent letter) and information sheet that they had to read and sign prior to their participation with this study. The consent letter outlined the objectives of the research, the procedures of the research, and the potential benefits of the study. All participants were advised that their comments would be anonymized to prevent identification of individuals in the study. Dispatchers participating in the interviews had the opportunity to withdraw at any time during the interview and up to November 30, 2016. Police officers were notified that they could leave the focus group

at any time, but that their comments prior to their departure could not be retracted as the information provided in the focus group did not identify by name who provided the information. Moreover, all of the information was grouped under themes at the time of the focus group session. Initial participation by dispatchers was minimal so to increase the participation of dispatchers, individuals were issued a five-dollar gift card from Starbucks. Police officers were provided with coffee and donuts during the focus groups.

3.3 Research Method: Survey with Users of Chatterbox

Since previous Chatterbox users could not be contacted and asked to participate in a survey due to privacy concerns, an online survey (see Appendix B for list of questions) was created to invite future users of Chatterbox to participate in the survey. A Canadian online survey website, *FluidSurveys*, was used to develop the survey. The ULTRA service plan was bought as the service plan covered all necessary survey requirements, such as having the data stored in Canada and the ability to have unlimited questions on the survey (FluidSurvey, 2016).

The survey questions, along with the consent letter, were submitted as a package to the Human Research Ethics Board at the University of the Fraser Valley. Once ethics approval was obtained, the survey went “live” and was made available on the internet at <http://fluidsurveys.com/s/tp/smsmstexting/>. An email was sent to the OCC manager requesting that there be a pre-programmed script in the Chatterbox program that would allow dispatchers to conclude all Chatterbox conversations with the following text - ***We are looking for your feedback on texting to police. Please fill out our short survey at***

<http://fluidsurveys.com/s/tp/smstexting/>. The survey was also advertised on the Transit Police website and the Transit Police Twitter account.

The survey was available online from May 17, 2016 to August 31, 2016. Prior to shutting down the survey, several emails were sent to the OCC manager and supervisors advising them of the end date. When the survey was concluded, there was a total of 221 completed surveys out of 920 Chatterbox conversations during that same time period. In other words, 24% of all chatterbox interactions resulted in participating in the survey. From these surveys, 34 were removed because they were “incomplete”. While the survey asked that it only be completed by those over the age of 19 years old, in total, eight additional surveys were removed because they were completed by people under the age of 19 years old. This left 179 completed surveys. Once the survey was ‘closed’, the database was exported into Microsoft Excel and the Statistical Package for the Social Sciences (SPSS) for analysis. Prior to analysing the data, the database was cleaned to ensure that missing data was identified and appropriately coded. As the survey was completed online using pre-defined checkboxes, there were no coding errors in the database. Given the exploratory nature of this study, once the database was ready for analysis, for the most part, univariate statistics, namely frequencies and distributions, were used in the analysis of the data; however, where appropriate, bivariate analyses, such as chi-square, were used to compare responses on key dependent variables.

3.4 Research Method: Data Analysis of Chatterbox Calls

Requests for statistics from the Chatterbox database were initially provided to the researcher in a PowerPoint presentation that had been assembled for Transit Police senior

management at an earlier date. Repeated requests to retrieve raw data from the Chatterbox database that would be inclusive of 2016 statistics were unsuccessful. Due to the unavailability of a larger data set, the data in the PowerPoint presentation was used to provide a small sample of the total number of Chatterbox calls received by the Transit Police.

The PowerPoint presentation provided the number of total conversations per month for the period between May 2014 and November 2015. The presentation was also the source of the total number of text messages sent between OCC operators and Chatterbox users between May 2014 and December 2014. It was for this same period that the PowerPoint presentation provided statistics for the average initial response time and the average length of the call.

Data for police files generated from Chatterbox conversations between January 1, 2014 and December 31, 2016 were obtained from PRIME. Based on interviews with dispatchers, such police files are differentiated from other police calls by a notation in the remarks field with keywords “SMS” or “chatterbox”. Reports were created through queries from PRIME and downloaded to Microsoft Excel. Once downloaded to the spreadsheet program, the data was reviewed. Under the field, “Final Call Type”, there were files that had been created in error or were duplication of another file. These files were removed from the final dataset. The records were then analysed and sorted by city, day of the week, time of the day, month and year, and transit line (Expo Line, Millennium Line, Canada Line, and all other calls, including bus-related calls, were classified under “Other”).

A similar process was conducted for the data necessary to analyse the total number of police files. Records for the number of police files generated annually for the period between 2014 and 2016 were downloaded from PRIME into a Microsoft Excel spreadsheet. Upon further analysis, there was a significant quantity of files that were facsimiles of previously created files. As with the Chatterbox files created in error, these data records were removed from the initial analysis. To compare the two datasets (police files generated from Chatterbox conversations and the overall number of police files), the records were analysed and sorted in a similar fashion as the Chatterbox police files. The data was sorted by city, day of the week, time of the day, month and year, and line. It should be noted that for both sets of data, the call type was classified using the most serious criminal offence. It was possible that for any given police file, officers could be investigating more than one criminal offence.

3.5 Research Method: Interviews with Dispatchers

Interviews with dispatchers were conducted over a two month period, starting with interviews on May 22, 2016 and ending on July 14, 2016. Several emails were sent to the shift supervisors for all four shifts requesting dispatchers to participate in the survey. Supervisors discussed the purpose of this study with their individual squads, and volunteers were scheduled when extra labour resources were made available. Three out of the four shifts participated in the interview process. The fourth shift was invited to participate, but no volunteers came forward, despite three email requests to the shift. The duration of the interviews was approximately between 25 and 45 minutes for each dispatcher.

The supervisors of the participating shifts emailed the researcher to advise of the assigned date and the time that had been scheduled to allow for the interviews to occur. The researcher met with each participant at the office of Transit Police Headquarters at the appointed date and time. Each interview was conducted in a private meeting room on the premises of Transit Police Headquarters located at the Sapperton Station in New Westminster. At the beginning of each interview, the researcher explained the interview process to the participant, including the consent letter, the ability to end the interview at any point during the interview, and that all answers to the questions were anonymous.

Prior to commencing the interview, the participant was given a copy of the consent letter to read and was required to sign the consent letter when finished reading the letter, if they were still interested in participating in the study. The researcher also signed the consent letter as the witness to the participant's signature. Each signed consent letter was then placed into an envelope and sealed in front of the participant. The researcher signed along the envelope flap and dated the front of the interview with the interview date. A five-dollar gift card from Starbucks was then handed to the dispatcher before the start of the interview.

Each participant was asked the same 27 questions (see Appendix C for list of questions) that addressed a variety of topics related to Chatterbox, including training on the program, how to process a Chatterbox conversation, and the dispatcher's personal experiences with the program (Bryman, Bell, & Teevan, 2012). No electronic devices were used to record the interviews, but answers to the questions were entered into a spreadsheet on a personal laptop by the researcher during the interview. Once the participant completed

his or her answer for each question, the researcher allowed approximately 10 to 30 seconds of silence to provide the participant the opportunity to provide additional information if required. This was to ensure that the interviews were not conducted in a hurried fashion.

In some instances, certain questions were not asked as they were not applicable to the participant. For example, if the participant had answered the length of employment at Transit Police had been only a few months, it was not necessary to ask a follow-up question that focused on whether the participant was consulted during the implementation phase of the Chatterbox program, as the participant was not employed by the organization at that time. Such questions were indicated in the spreadsheet by an “NA”. After each interview was completed, the spreadsheet containing the interview answers was saved to a USB stick and backed up on the researcher’s personal laptop computer. The spreadsheet was password protected to ensure the security of the dispatchers’ answers.

In total, interviews were conducted with 9 of the 34 part-time and full-time Transit Police dispatchers. A number of attempts were made to solicit the participation of additional volunteers with the offer of a five-dollar gift card to Starbucks. These attempts were unsuccessful. Several months after the final interview, trial versions of the qualitative analysis programs NVivo and ATLAS.ti were used to assist in analysing the interview data and develop themes from the answers provided by the dispatchers. The results from this process were simplistic with the themes being described in one or two words.

As a result, the researcher copied and pasted the answers from the spreadsheet into a word document to easily view the answers to each question. The answers were then printed out on poster-sized paper where the researcher took a number of coloured

highlighters and used the coloured highlighters to manually group similar themes. The identification of specific themes was based on responses that were found repeatedly in the participants' replies. Based on the answers provided by the participants, the researcher was able to identify six major themes in the areas of training, technology difficulties, and the complexities of handling a Chatterbox call for service. Rather than being exclusively representative, direct quotes were selected from the interviews that best described and illustrated these themes.

3.6 Research Method: Focus Groups with Transit Police Officers

Focus groups were conducted with patrol members working from both the Transit Police Headquarters and the Bridgeport office located at the Bridgeport Station in Richmond. The supervisor for each squad was contacted directly through email and was queried when it would be most appropriate for the researcher to conduct the focus groups. Each supervisor provided useful information on the availability of each patrol squad. The focus groups were carried out with two squads from the afternoon shifts (both squads from the Bridgeport office), and three squads from the morning shifts (two squads from the Transit Police Headquarters and one squad from the Bridgeport office). Due to time constraints, the researcher was unable to meet with the other three remaining squads; however, there is nothing unique or distinct about the squads that did not participate compared to those that did.

Each focus group had between 6 and 12 members, and the sessions were conducted over a one month period, starting on June 9, 2016 and ending on July 10, 2016. At the beginning of each shift, all patrol members are required to attend a pre-shift meeting or

briefing. On the day of the scheduled date for the focus group, the researcher attended the shift briefing. Once the briefing was concluded, the researcher was given permission by the supervisor to begin the research session. Each focus group lasted 25 to 40 minutes in length, and the sessions were held in the briefing room of each participating squad.

Prior to the commencement of each of the focus groups, the police officers were asked if they were willing to participate in the study. Only the police officers that had attended the shift briefing on the prescribed day were invited to participate in the focus group. Those who decided to partake in the focus group were asked to read and sign a consent letter. The potential participants were informed that their comments would be anonymous, and that they could leave the session at any time and end their participation; however, any comments they made while they were still in the focus group would be included in the analysis as there was no way of distinguishing one comment from another since all responses were grouped together and recorded without identifying who made the comment. In the five sessions conducted for this thesis research, only one police officer asked to opt out of the focus group and left the briefing room before the consent letter was issued. All other police officers agreed to participate in the study and stayed for the entire session.

Once the consent letters were signed and witnessed by either another police officer or the researcher, the forms were placed in a single envelope and sealed by the researcher. The police officers were then asked nine questions (see Appendix D for list of questions) about the Chatterbox program. As with the dispatcher interviews, no electronic recording devices were used. The responses were typed by the researcher into a personal laptop in a

Microsoft Word document. The comments from each focus group was saved in its own Microsoft Word document file that included the session date in the name of the document.

Despite the initial instructions provided by the researcher to talk slowly and that police officers were to talk one at a time to allow the researcher the opportunity to capture all of the comments, there was a number of occasions where participants would quickly blurt out answers or would interrupt their colleagues in an attempt to verbalize an opinion. When this would occur, participants were asked to slow down or repeat their comments in order for the researcher to type out the answers.

As with the dispatcher interviews, the answers from the focus groups were examined by the two qualitative software programs. Similar to the results with the dispatcher interviews, the software produced one word themes that provided little or no value to the overall findings. The analysis was then conducted manually by using the same coloured highlighter system to develop themes based on similar answers from the participants.

By deploying this method, four major topics emerged as a result of the focus group sessions. These themes included the observation that a significant number of Transit Police officers had a lack of training or knowledge of Chatterbox, and that police officers felt the slow flow of information hindered their ability to do their job. The two other themes were a sense of frustration with being assigned what was felt to be insignificant calls for services, and that the police officers recognized that the Chatterbox program was an integral and important part of crime reporting. To describe these key points, many of the

police officers' comments were included in the analysis below. This also meant the use of curse words to best portray how the participants felt about the program.

Chapter 4: Findings

4.1 What the Public Says about Chatterbox

In an earlier study comparing different methods of getting around Metro Vancouver, it was concluded that almost an equal proportion of men (48 per cent) and women (52 per cent) used transit (TransLink, 2013). These findings were similar to the ratio of participants that responded in the current research study, as 51% of participants were female while 47% of the participants were male. The average age of the respondents at 35 years old was significantly different than the TransLink survey which determined the 18 to 24 age group was most likely to use transit as opposed other modes of transportation (TransLink, 2013).

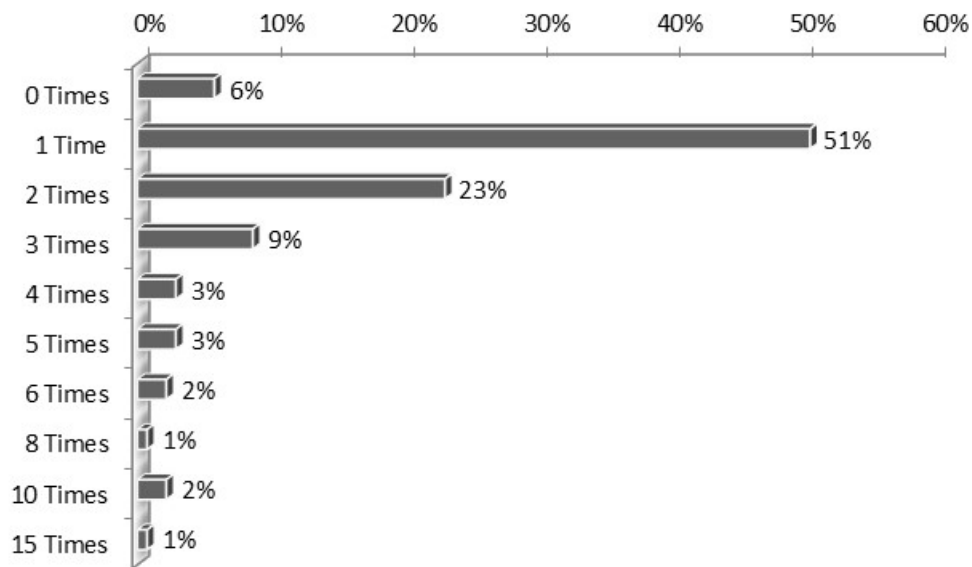
When asked how often respondents used transit, 79% reported that they used transit daily. This finding is important as it suggests that this sample is a frequent user of transit and, therefore, should have the knowledge and experience to answer questions about safety on transit and the Chatterbox program. In terms of the frequency of transit use by the rest of the sample, 13% reported being weekly users of transit, 3% were monthly users, and 5% self-identified as rare users of transit. The two most common modes of transportation used within the Metro Vancouver transit system were the SkyTrain (which included Expo and Millennium lines at 35 per cent) and the bus (33 per cent). Moreover, 21% of the sample reported using the Canada Line, 10% used the Sea Bus, and 2% used the West Coast Express.

In terms of the contribution that Chatterbox plays in the personal safety of those on the transit system, 43% of respondents stated that the availability of Chatterbox made them

feel “very safe” on the transit system. Of note, this did not vary by gender. The mean score for the entire sample on this question, which was based on a five-point Likert scale anchored by 1 being very unsafe and 5 being very safe, was 4.1. When calculated by gender, the mean score for males was 4.12, and the mean score for females was 4.04. Statistical analysis between the two genders determined that there was no statistically significant difference between how males and females experienced in terms of safety, $t(168) = 0.259$, $p = 0.397$.

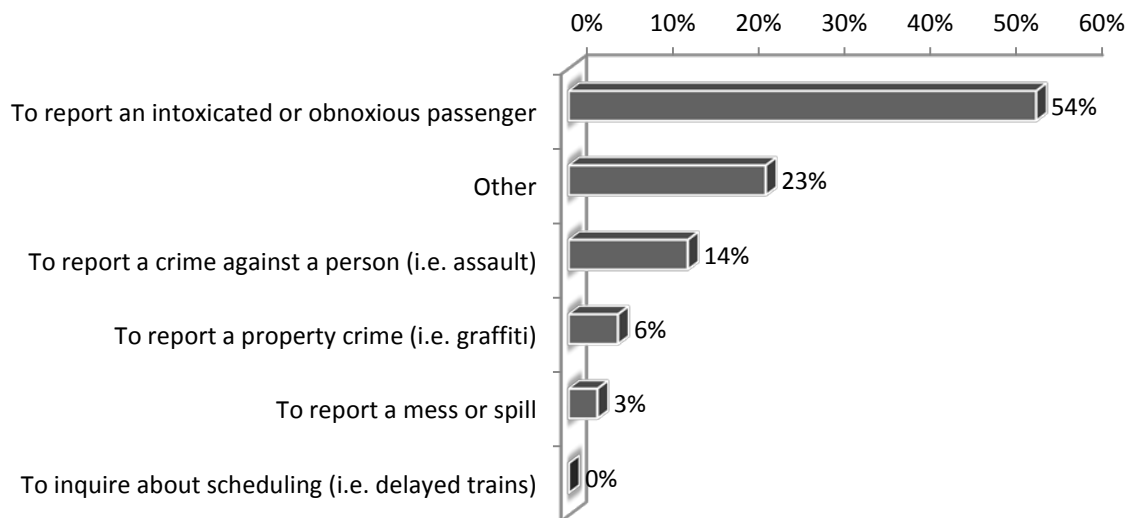
When asked whether respondents had ever used Chatterbox to report something to Transit Police, 83% indicated that they had used the SMS texting program before. Those who had used Chatterbox at least once in the past year reported using the program, on average, 2.13 times. The range was from once to 15 times in the past 12 months. Over half of the participants had used the program once (see Figure 1).

Figure 1. Number of Times Chatterbox was Used in the Past 12 Months (n = 138)



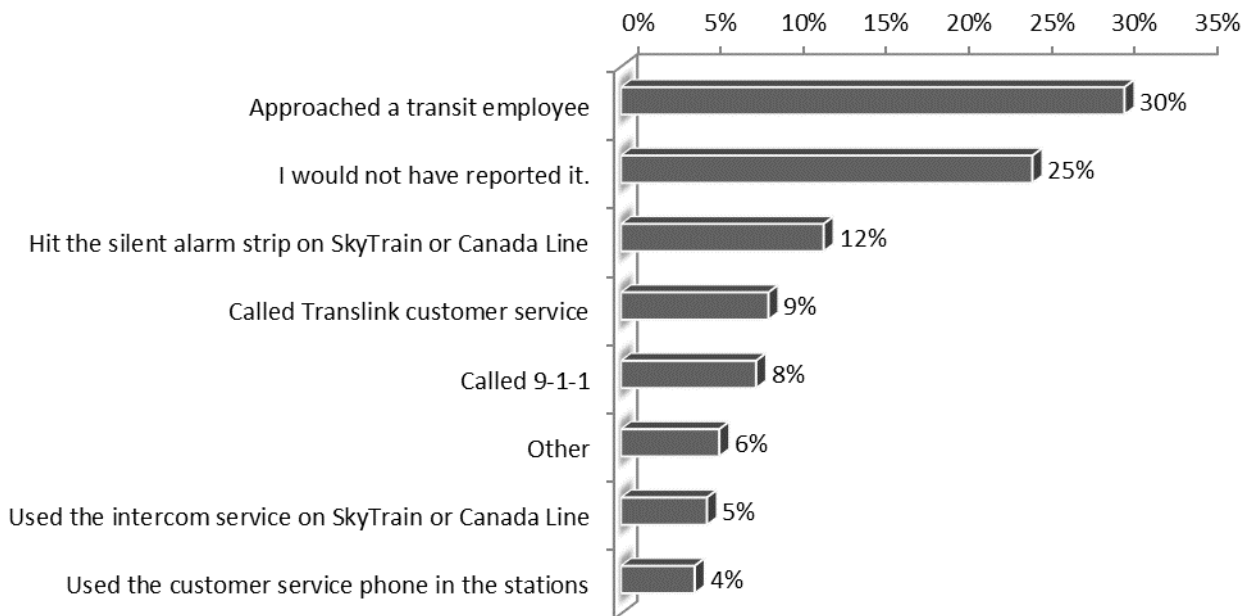
Of those who used Chatterbox, 54% said they had used it to report an intoxicated or obnoxious person (see Figure 2). Surprisingly, no participant had used the program to inquire about scheduling concerns. Moreover, nearly one-quarter of the sample (23 per cent) was classified as ‘Other’. Examples of things that made up the ‘Other’ category included things like an “obnoxious person at station entrance”, “passenger losing consciousness”, “fare evader”, “bikes during rush hour”, and “drug dealing on the trains”.

Figure 2. Percentage of Incidents Reported (n = 149)



Respondents were asked if the Transit Police's SMS texting program was not available, what other means of reporting they would have used to report their concern. In total, 25% of respondents indicated that, if Chatterbox was not an option, they would not have reported the incident (see Figure 3). Another 30% stated that, in the absence of Chatterbox, they would have approached a transit employee. This was followed by hitting the silent alarm on the SkyTrain or the Canada Line (12 per cent). The 6% of respondents who selected 'Other' indicated that they would have used Twitter, the non-emergency police line of another police agency, or the Transit Police's non-emergency phone number.

Figure 3. Percentage of Alternative Methods of Reporting Incident (n = 270)

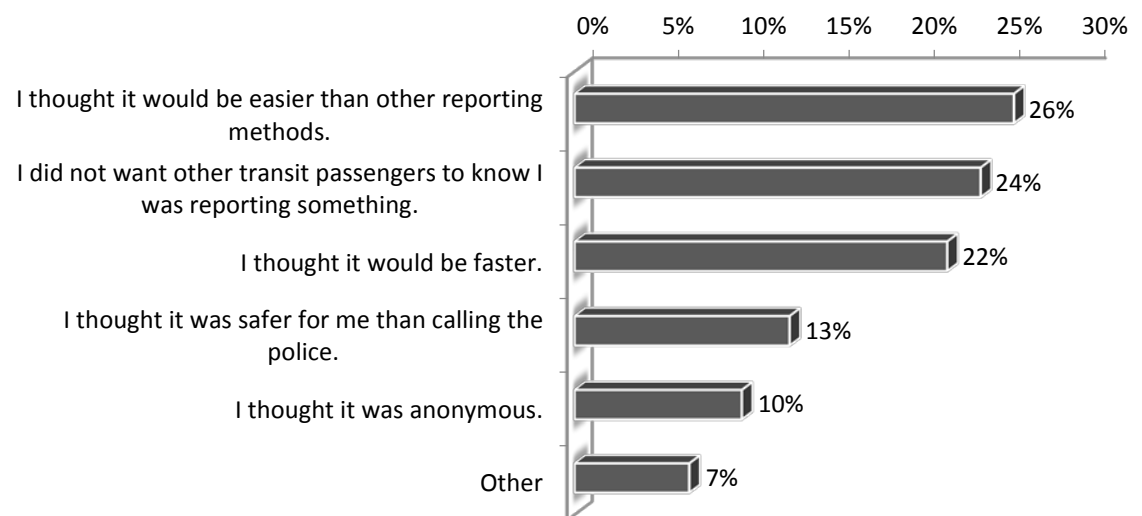


Using a Likert five-point scale anchored by very unlikely = 1 and very likely = 5, When asked whether respondents were more or less likely to report something using the Transit Police's SMS texting program (Chatterbox), slightly more than three-quarters (78 per cent) indicated that they were very likely to use the program to report something on the transit system. The mean score on the scale was 4.66. Of course, it is important to keep in mind that this was a sample of people who had used the Chatterbox system in the past 12 months.

When asked why they had used the Chatterbox system, respondents most commonly indicated that they thought it would be easier than other reporting methods (26 per cent), they did not want other transit passengers to know they were reporting something (24 per cent), and they thought it would be faster (22 per cent) (see Figure 4). Importantly, 13% believed that it would be safer for them to use Chatterbox than to phone

the police, and 10% believed that they would be anonymous using Chatterbox. When selecting “other”, almost half the responses were in relation to convenience. For example, one participant wrote, “It is fast easy and inconspicuous allowing me to continue to provide details and carry on my journey without interruption or having to engage with a dangerous or unpleasant situation.” Another person stated, “I was next to the aggressive person and felt if I confronted personally I would be involved In (sp) a physical altercation.”

Figure 4. Percentage of Reasons for Using Chatterbox (n = 149)



Another reason was that the participants did not feel that the call required an emergency response. Several individuals commented that they were “[n]ot sure if it was serious enough” and “I did not think it was an emergency, but did think it was a criminal activity that only the police are equipped to deal with”. The other main topic for using Chatterbox was related to the offender. Respondents replied they used the program because “I did not want the person I was reporting, specifically, to know I was reporting him, as I

was sitting quite near him”, “I was next to the aggressive person and felt if I confronted personally I would be involved in a physical altercation”, and “It's good when u r directly in front of the suspect and they don't know u r reporting them”. One individual replied Chatterbox was used because they were hearing impaired and could “type better then (sp) hearing on a phone”.

When asked how easy it was to use Chatterbox using a five-point Likert scale anchored with 1 being very difficult and 5 being very easy, the mean score was 4.70. This meant slightly more than three-quarters (77 per cent) of participants found the SMS texting program very easy to use. Similarly, when asked to rate their level of satisfaction with the timeliness of the response they received to their text conversation using a five-point Likert scale with 1 being very dissatisfied and 5 being very satisfied, the mean score was 4.63, with slightly more than three-quarters of the sample (76 per cent) indicating that they were very satisfied. The main issue for those who responded either with a 1 (very dissatisfied) or a 2 (somewhat dissatisfied) commented that they felt the service was too slow. One individual commented “[t]oo slow, conversations seem to take too many steps to get basic information I provide upfront and by then the person has gotten off the bus and gone away. Another participant believed the system was an “emergency service and should be really fast.”

Those who indicated they were satisfied with the timeliness remarked that the service was very good. One participant wrote, “I felt like my concerns were taken seriously and acted on promptly”. Other comments included, “[r]esponse was immediate, and we were able to coordinate help for the passenger within 2 stops” and “[t]he person who texted

back was very professional and helpful in addressing my concerns”. Another statement from a respondent was the “TP SMS person was considerate. The first time I did not see the matter to be taken care of. The second time I saw that the matter was being addressed and I felt that it was effective.” Several participants remarked on the response of Transit Police and wrote, “Transit police responded immediately and after investigating, replied to inform me of the outcome” and “[t]he officers were very quick to respond and provide a solution to the problem I reported.”

When asked about their level of satisfaction with how their text conversation was handled, using the same five-point Likert scale as the previous question, the mean score was 4.61. In fact, slightly more than three-quarters of the sample (77 per cent) indicated that they were very satisfied with how their text conversation was handled. When asked to comment on their level of satisfaction, several themes emerged. Those who said that they were either somewhat or completely dissatisfied with the program largely attributed this to the request of the dispatchers for personal information, including the complainant’s name, birthdate, and home address. Many felt that the program should give the public a level of anonymity when reporting criminal offences and social disorder. One person commented that they “[t]hought it was anonymous, felt pressured into giving my information like I was the criminal”. Others stated that the level of importance of his or her complaint did not necessitate the recording of personal information.

Participants that indicated they were either somewhat or completely satisfied with the response they received indicated that this rating was based on things, such as “[t]he responding dispatchers are courteous and efficient and the police response is appropriate to

the severity of reported incidents. Furthermore, the dispatcher responded later to advise me the situation was handled which made me more confident in the effectiveness of using the service in the future” and “[q]uick response that was "human", i.e. not 'electronic' feeling, and much like a phone report might have been responded to yet I could more comfortably text without feeling someone might react negatively to what I was reporting.”

In total, 14 participants referred specifically to the level of professionalism of the dispatcher. One person submitted the following comment – “[t]he dispatchers were very professional and most times responded quickly.” Another participant wrote, “[t]hey were communicating and updating me on the situation at all times, and also gave me advice on how to avoid escalating the situation.” Other remarks included, “they comprehended what i was saying and asked the right questions to get to the issue” and “[v]ery professional and to the point, fast response, great overall!”

Of the 179 surveys, 148 participants provided a response to the question on the estimated total amount of time spent during the text conversation. To eliminate any outliers, the top 95% of data was retained for analysis. This resulted in data ranging from less than one minute to 24 minutes. The mean amount of time was 8.6 minutes with a standard deviation of 4.89 minutes. The median was eight minutes.

For those who provided a response, only 3% of respondents reported that they would not use Chatterbox again. One participant stated, “I wanted to report anonymously and did not like being asked for my name and contact information. If it is possible to be anonymous, I would use it again.” Another individual indicated dissatisfaction with the outcome and wrote, “I was very distraught (being assaulted (sp)) and it seemed no one

cared. It felt [like] everyone was just doing their due diligence.” Another person reported, “They sent bus driver supervisors to a fare evader complaint. Bus driver supervisors cannot do anything!”.

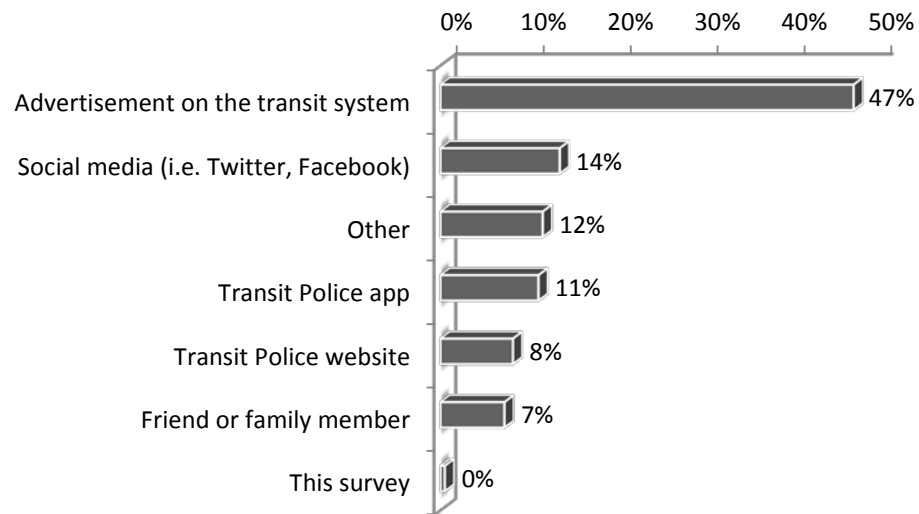
Most respondents indicated that they would use the program again, and made reference to the fact that the program was “fast and effective” and “discreet”. One person wrote, “[i]t was fast, convenient, and they handled it seriously. Honestly, with the recent assault on the skytrain (sp) in the news, I’ve been a bit anxious riding the sky trains (sp) at night and weekends when there’s lots of intoxicated passengers. But, knowing the quick response I received today, I am feeling a lot safer.” Other respondents stated, “[a]n effective way to report issues on Skytrain (sp) where one wants to be discreet and not necessarily safe for a Skytrain (sp) attendant (yellow strip)” and “[i]’s a fast and efficient way to report possible criminal behavior on buses without drawing attention to myself.”

In total, virtually the entire sample (96 per cent) stated that they would recommend Transit Police’s SMS texting program to others. A small percentage (4 per cent) reported that they would not recommend the program. Those who responded that they would not use the program had concerns with providing personal information over text message, and believed that the program did not work to their satisfaction. The most common reason for stating that they would recommend the program to others was based on the convenience of the program. One user commented, “[e]fficient way to communicate quietly during an incident or when there is a health concern for another passenger”. Other reasons included, “[l]ess stressful, people tend to get anxious when dialing 911 and speaking to the operator” and “it’s a simple way to have something addressed that you are uncomfortable with”. One

reason that was also consistently stated was the ability to contact police in an inconspicuous manner. Several individuals wrote that the program “is very discreet if someone was reporting a security issue” and “[i]t is a very effective way to report incidents without becoming involved in a risky situation”. Another theme focused on the speed of the response to the user. A user remarked, “[f]ar faster than I expected” while another one stated, “[t]he immediate response made me feel safer”.

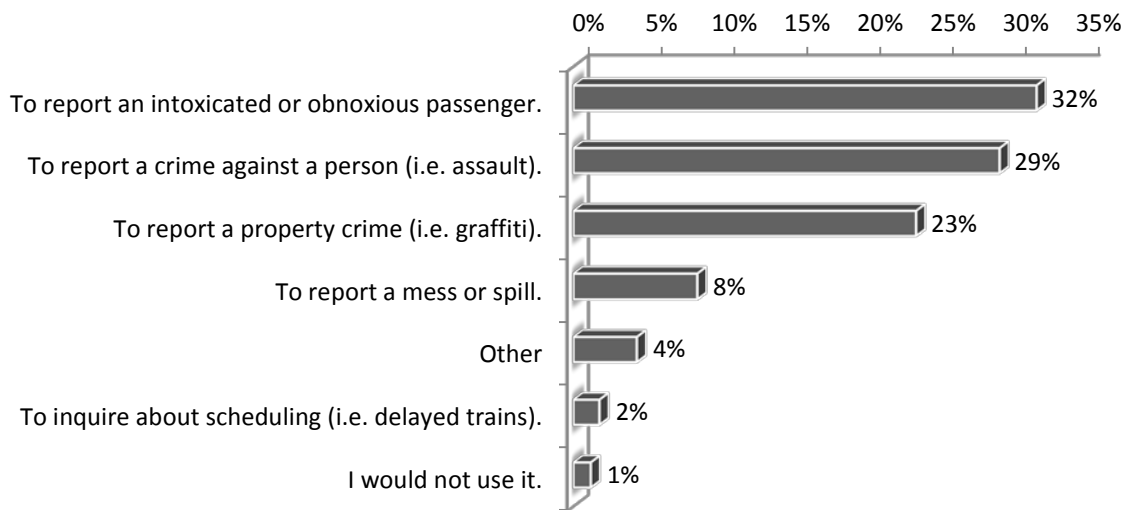
It was interesting to learn that almost half of the sample (47 per cent) reported finding out about Chatterbox from the various advertisements on the transit system, including on SkyTrain and buses (see Figure 5). Approximately 19% indicated that they learned about Chatterbox through social media outlets, including Transit Police’s Twitter and Facebook accounts, while 12% selected ‘Other’, which included being informed about Chatterbox by Transit Police officers.

Figure 5. Method of Learning about Chatterbox (n = 148)



When asked what else they would use Chatterbox for in the future, the most common responses were to report an intoxicated or obnoxious passenger (32 per cent), to report a crime against a person (29 per cent), and to report a property crime (23 per cent). These three responses made up more than four-fifths of the reasons provided by respondents (see Figure 6). ‘Other’ reasons included personal safety concerns, non-emergency issues, suspicious persons, transit-related questions, police matters, and medical emergencies. Of note, nearly one-third (32 per cent) of “Other” responses were in reference to the personal safety of the participant or others while on the transit system.

Figure 6. Reasons for Using Chatterbox in the Future (n = 173)



In terms of improvements to the Chatterbox system, one of the most common themes was the ability to send photos. In total, 13 participants indicated this issue stating “[e]xpand to include images”, “be able to send photos to dispatch”, and “I tried to send a pic of her. unable to do it. if the system could accept pics and videos it can provide a lot of extra help and evidence for police to work with.” Three individuals asked for GPS coordinates from their cell phone to be used to provide dispatchers with a location of the complainant.

Another area of concern for participants was the need for more advertisement of the program. One respondent wrote, “[m]ore advertisements, maybe letting people know what type of incidents you can contact this number for”. Other participants stated, “[p]ost the number and acceptable reasons to use it in every skytrain (sp) and bus”, “[h]ave the number added under the emergency button on trains so I don’t have to google to find it”, and “[p]ublicize it more on transit and at stations and stops”. Other considerations included

how to find the bus or SkyTrain number and not wanting to provide personal information, such as one's name and birthdate. This was reiterated in the following comments –

“[m]ake it clear in signage that the coach number of a bus your (sp) on will be asked for, and where that number is located/what it looks like” and “[d]on't require name & address for reports”.

At the end of the survey, respondents were provided with an opportunity to write anything that they wanted about the survey, their experiences with transit, or about the Chatterbox program. Several participants wrote compliments about the program. One such comment was “I think this program is a great option in addition to the yellow silent alarms”. Another person wrote, “I think you are making great progress in customer satisfaction.” Other remarks comprised of “[t]hanks for your help, and your hard work!”, “[i]t's a good initiative, I like it.”, and “[g]reatest idea, I think this is so useful and helpful.”

However, the program's response time provided a mixture of negative and positive statements. One respondent stated, “[i]t was a fast response, faster than I expected which made me feel more comfortable and secure using this program”, while other participants remarked, “[m]aybe my expectations were too high as I expected a quicker response (sp) time” and “my only concern is how quickly can they respond to threats. So far my 3 texts, 2 were very quickly dealt with.”

Another subject that respondents wrote about was the response their complaint received. Comments included, “[h]ave police or Transit Security respond to problem passengers, not customer service staff or bus driver supervisors!”, “[p]olice or transit workers were not available to address issue”, and “[i]f the police cannot respond, at least

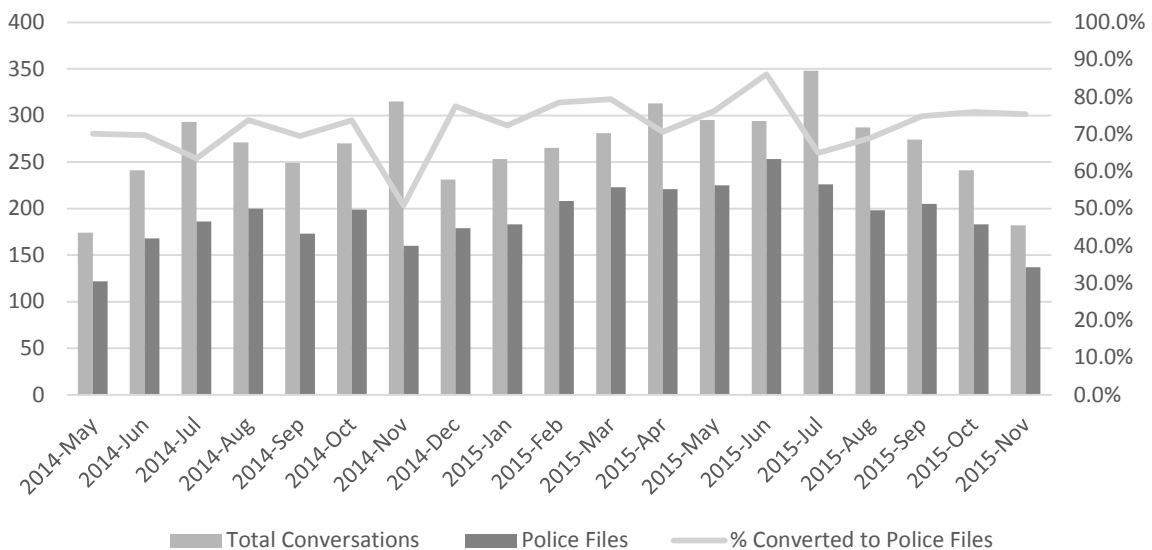
send Transit Security. At least they can do something. Don't send bus driver supervisors! They can't do anything!". This included criticism about Transit Police – "I was followed up afterwards by police, but it would have been better if they could have sent them during the event, and not after." and "[o]nly works if the police are around. I would use it many more times but they are not usually around."

The other major area that respondents commented on focused on the program's signage and advertisement. Several users felt that the program needed better advertisement – "I think you should advertise the availability of the texting program again, people may not be aware of it. Perhaps stickers or signs on the train cars themselves" and "I've never heard of this program before. Advertising this and the number would make many women feel safer". Additional observations included, "[w]ould be great to have the everything (sp) pH # to text clearly displayed on the bus since I had to Google the number" and "I wish I had the car number inside and not only labeled outside. If we could see the train number and the car number inside the Skytrain (sp) that would be a faster way to identify and get into the right car by police transit."

4.2 Data Analysis of Chatterbox Calls

Not all Chatterbox conversations are calls for police assistance. As noted, users of Chatterbox have used the program for a variety of reasons, including questions about liquid spills on SkyTrain and reports of rude passengers. As a result, there was a difference between the number of police files resulting from Chatterbox conversations and the total number of Chatterbox calls. Between May 2014 and November 2015, the average percentage of Chatterbox conversations converted into police files was 72% (see Figure 7).

Figure 7. Conversion of Conversations to Police Files: May 2014 to November 2015



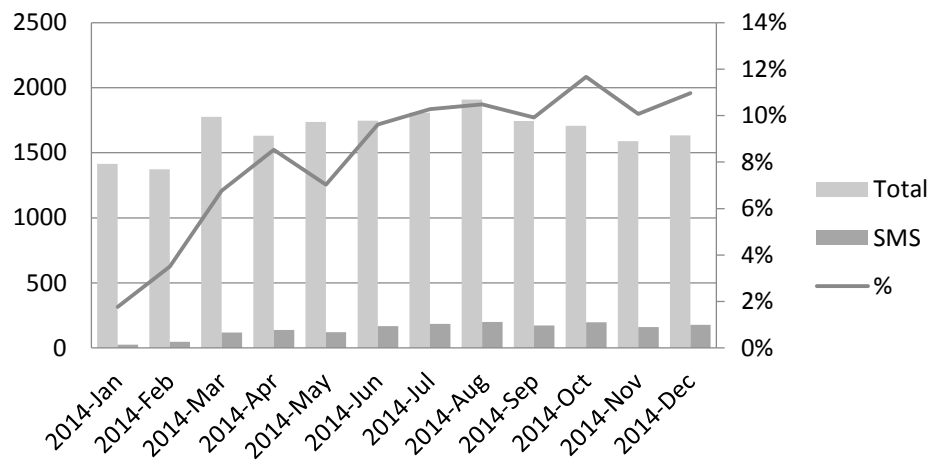
During the interviews with dispatchers, many of the participants alluded to the difficulty of obtaining information necessary for police in a timely fashion. One of the disadvantages of Chatterbox is demonstrated by the average number of text messages per conversations and the average length of each conversation (see Table 2). Between May 2014 and December 2014, the average number of messages exchanged per conversation was just under 14 messages (13.30) and the average conversation lasted 29:22 minutes. The first response by dispatchers to the first incoming text messages was averaged at 1:05 minutes.

Table 2. Total Number of Chatterbox Conversations: May 2014 to December 2014

Month	# of Text Msg	Total Conversation	Avg # of Msg/ Conversation	Avg Length of Call	Avg First Response
2014-May	2379	174	13.67	25:07	1:00
2014-Jun	3142	241	13.04	18:49	1:14
2014-Jul	3855	293	13.16	22:39	1:02
2014-Aug	4010	271	14.80	27:30	1:09
2014-Sep	3218	249	12.92	39:58	1:05
2014-Oct	3970	270	14.70	48:24	1:01
2014-Nov	3372	315	10.70	32:04	1:06
2014-Dec	3096	231	13.40	20:23	1:09
Average	3380	256	13.30	29:22	1:05

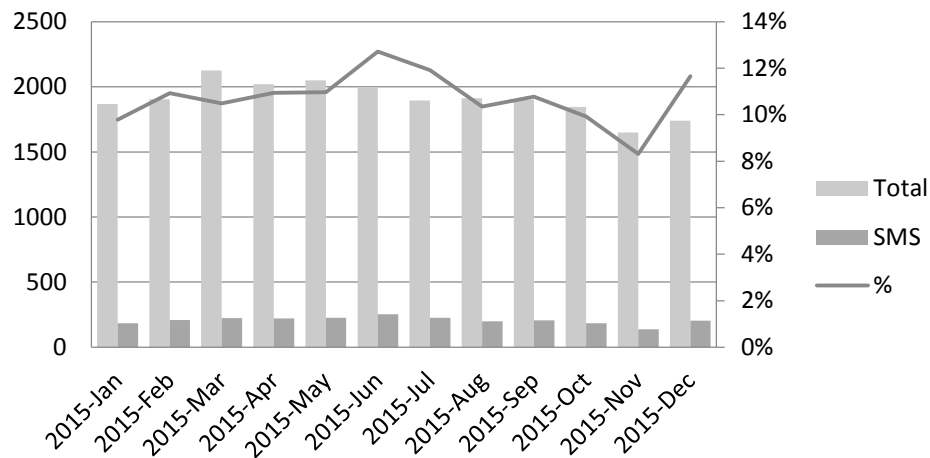
Police files generated by Chatterbox text messages were analysed for the time period between January 1, 2014 and December 31, 2016. According to PRIME data, there were a total of 6,423 calls for police service generated by Chatterbox text messages. During the same period, the total number of Transit Police files was 63,935. In effect, the average percentage of the Chatterbox calls converted to police files compared to overall Transit Police files was 10%. In 2014, there were a total of 20,065 calls for police service. During the same period, 1,719 of those calls were generated from Chatterbox users. The average percentage of Chatterbox calls during this time was 8.6% (see Figure 8).

Figure 8. Police Files by Month: January to December 2014



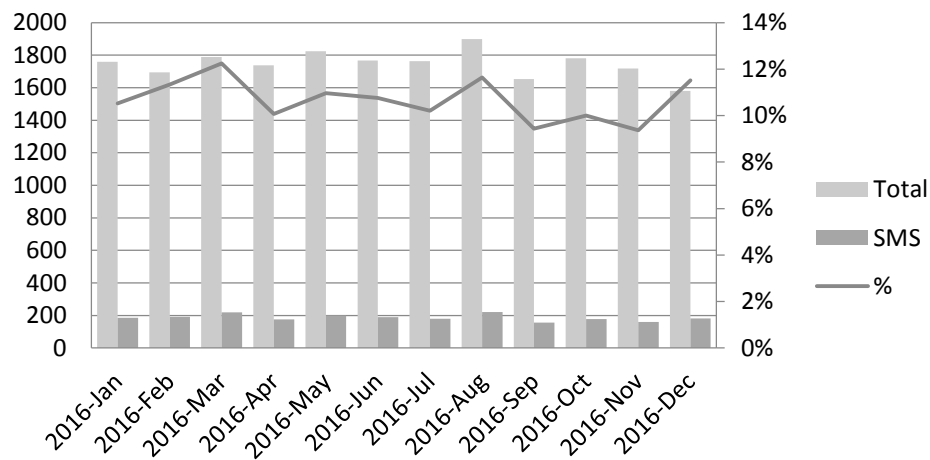
In 2015, there were 2,465 police files generated from passengers texting to the Chatterbox program. This accounted for 10.8% of all police calls, which was 22,908 files for the year (see Figure 9).

Figure 9. Police Files by Month: January to December 2015



During 2016, Transit Police responded to 20,962 calls; of those, 10.7% or 2,239 calls were generated from Chatterbox (see Figure 10).

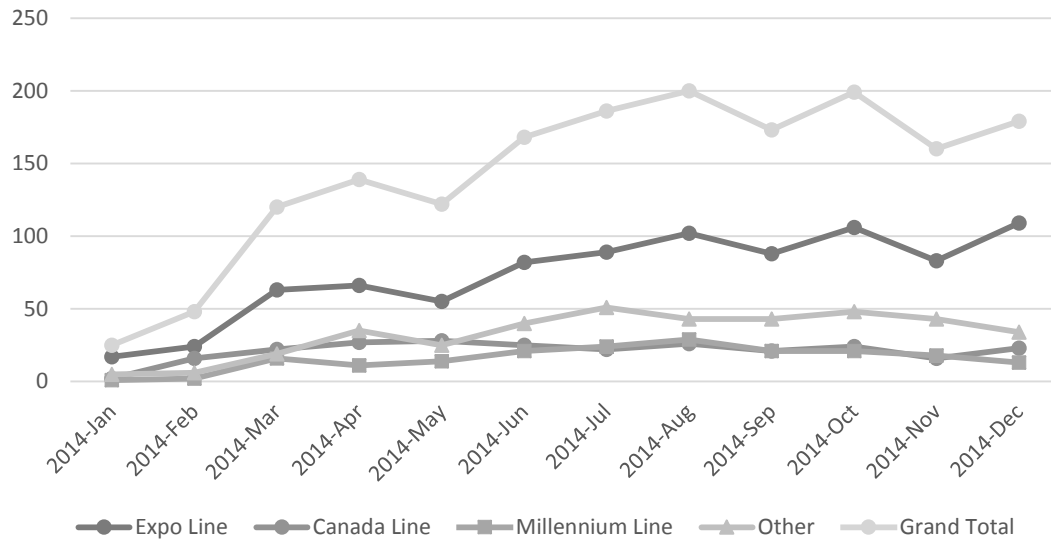
Figure 10. Police Files by Month: January to December 2016



Between 2014 and 2016, the Expo SkyTrain line generated the most calls for service from the Chatterbox program. During this period, the Expo Line had 3,481 police calls from Chatterbox users (54.2 per cent). Canada Line accounted for 775 police calls (12.1%), Millennium Line had 722 police calls (11.2 per cent), and police calls on bus routes and non-transit property was 1,445 police calls (22.5 per cent) (see Appendix E for total calls per line per year).

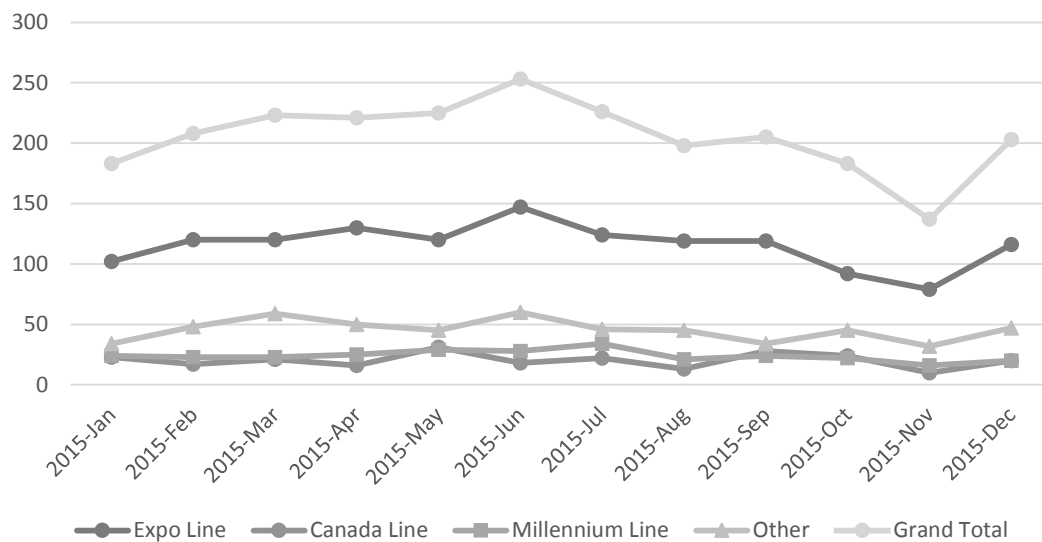
In 2014, the Expo Line had 884 calls for service compared to 191 calls for service on the Millennium Line and 252 calls for service on the Canada Line (see Figure 11). The remaining 392 calls in 2014 were related to bus and off-transit property police related files (Other).

Figure 11. Police Files by Month by Line: January to December 2014



In 2015, once again, the Expo Line had the most calls for service with 1,388 police files. The Canada Line was steady at 243 calls for service and the Millenium Line increased in the number of calls from 191 in 2014 to 289 in 2015. Bus and off-transit related police files also increased in 2015 to 545 files (see Figure 12).

Figure 12. Police Files by Month by Line: January to December 2015



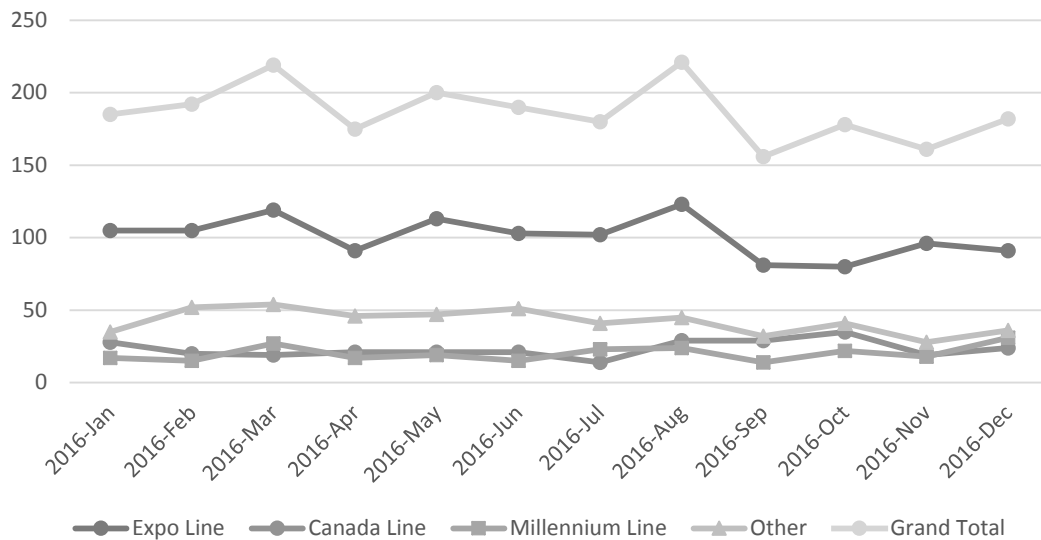
A comparison of the police files generated by Chatterbox conversations in 2015 and the percentage of passengers boarding the various modes of transit during the same year was interesting. The percentage of police files that resulted from Chatterbox users on the Canada Line was similar to the percentage of the overall boardings observed on the Canada Line. The number of boardings recorded on the SkyTrain system (combination of Expo Line and Millennium Line) accounted for 21.4% of the total number of boardings. However, the SkyTrain system accounted for 68% of the police files created by Chatterbox conversations. The reverse was true for the category of Other (see Table 3).

Table 3. Chatterbox Police Files Versus Boardings: 2015

Line	Police Files	Percentage	Boardings	Percentage
SkyTrain	1677	68.0%	77,592,600	21.4%
Canada Line	243	9.9%	40,972,300	11.3%
Other	545	22.1%	244,355,800	67.3%
Total	2465	100.0%	362,920,700	100.0%

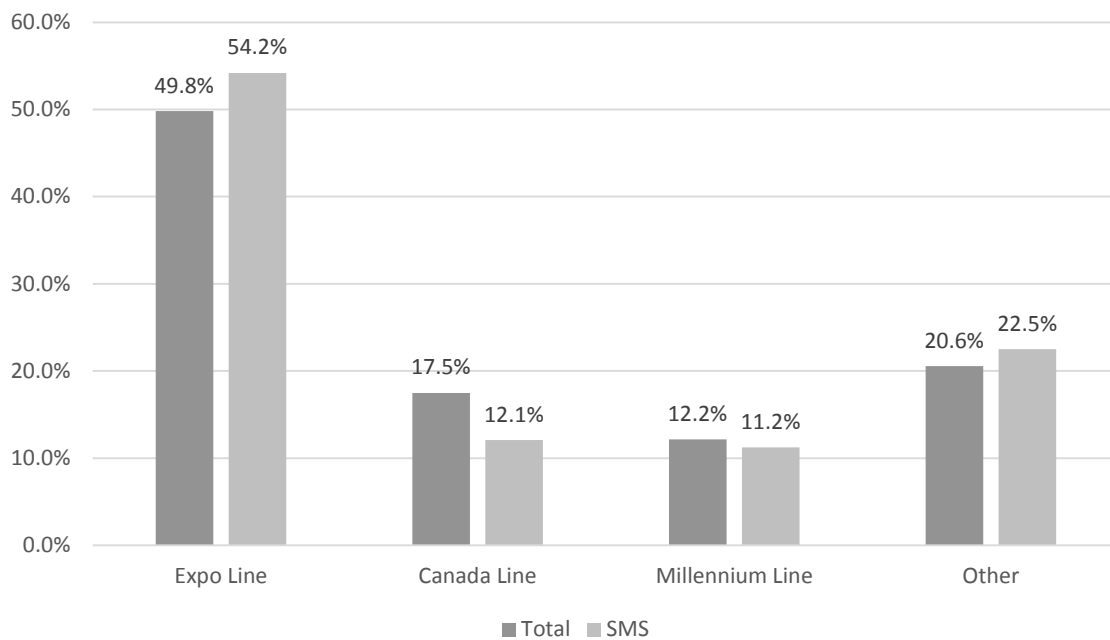
During 2016, calls for service on the Expo Line was 1,209 while Canada Line and Millenium Line accrued 280 calls and 242 calls consecutively. There were 508 calls recorded at other locations (see Figure 13).

Figure 13. Police Files by Month: January to December 2016



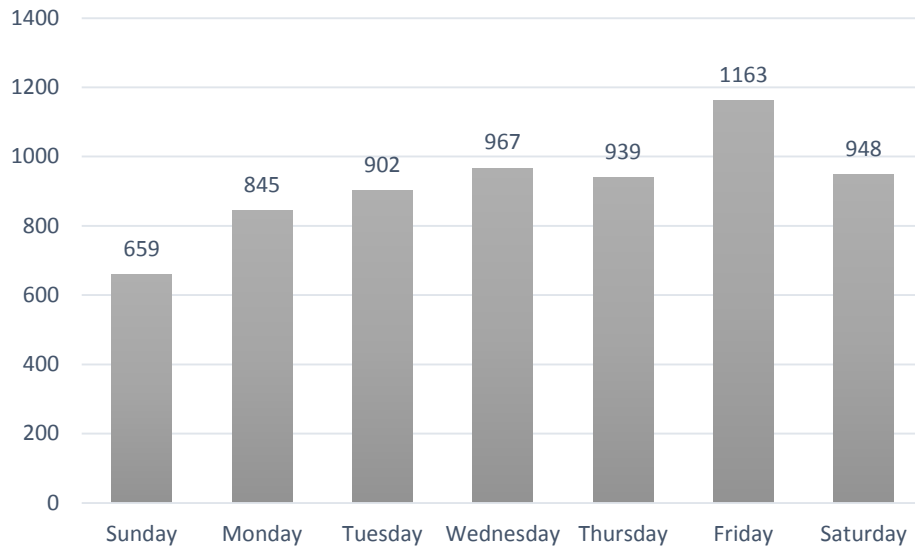
When compared to the overall number of police files that Transit Police received, the breakdown of police files generated from Chatterbox conversations were very similar. Between January 2014 and December 2016, the Expo Line accounted for half of the police calls, both in overall numbers and Chatterbox files (see Figure 14).

Figure 14. Percentage Breakdown by Line: January 2014 to December 2016



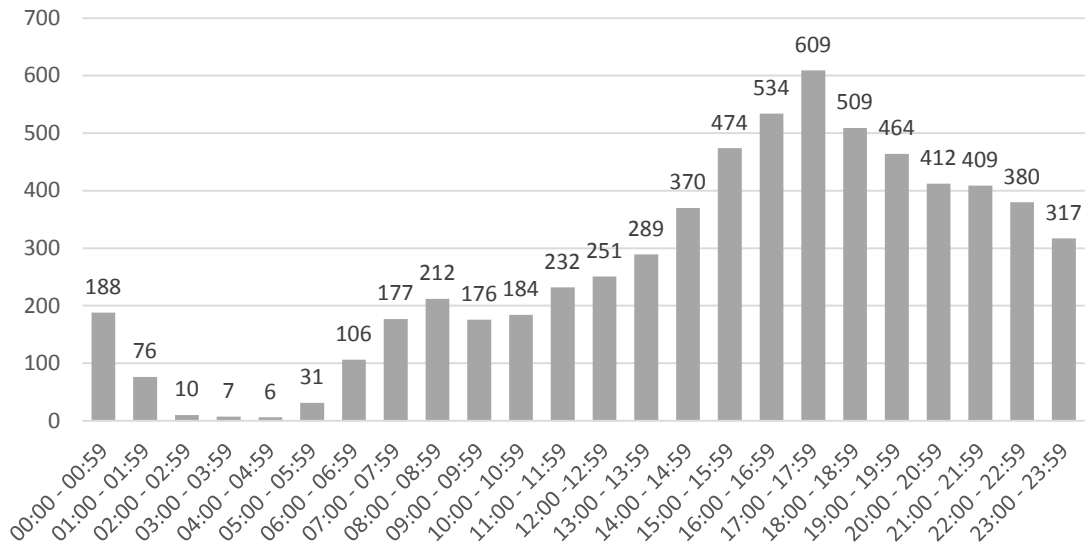
When sorted by the days of week, Friday received the highest volume of calls (18.1 per cent). Interesting, there was a spike on Wednesdays (15.1 per cent) compared to other weekdays, excluding Fridays (see Figure 15). A possible explanation for the increase of calls through Chatterbox could be attributed to “Welfare Wednesdays” where the provincial government of British Columbia issues social assistance and disability cheques and payments arrive on a monthly basis, usually the last Wednesday of the month. It has been noted that an increase of calls for emergency personnel occur on and around Wednesday (Slattery, 2017; Government of British Columbia, n.d).

Figure 15. Call by Day of Week: January 2014 to December 2016



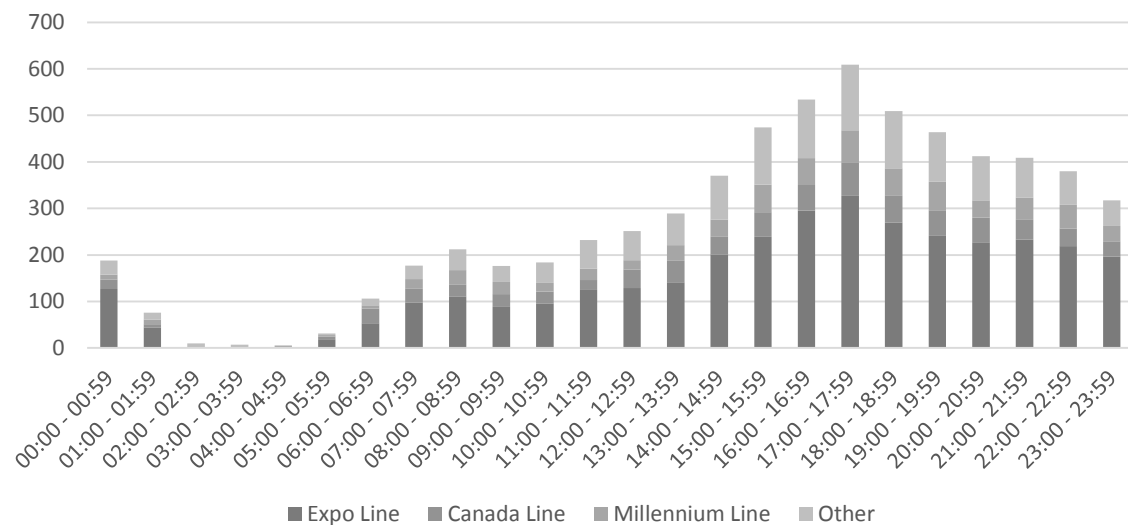
Calls for service were analysed by the time the offence was deemed to have occurred and then grouped into 60 minute intervals. Over half of the calls for service (53.1%) occurred between the hours of 15:00 and 22:00 (see Figure 16). This closely correlates to overall police calls for service that tend to spike upwards during peak afternoon hours and after evening sporting and social events. Often such events allow for the purchase of liquor where individuals may become intoxicated and unruly due to the consumption of alcohol and result in calls for service for acting inappropriately while riding on the transit system.

Figure 16. Police Files by 24 Hour Period: January 2014 to December 2016



Upon further analysis, the analysis on police files by the 24-hour period were separated into the Expo Line, Canada Line, Millennium Line, and Other (bus and off transit property calls). On average, the Expo Line accounted for half (49.7 per cent) of all Chatterbox calls between January 1, 2014 and December 31, 2016. The most significant time period for all four categories was between 17:00 hours and 17:59 hours (see Figure 17). During that time, Expo Line experienced 327 police files generated by Chatterbox, Canada Line had 71 police files, Millennium Line had 70 police files, and Other had 141 police files.

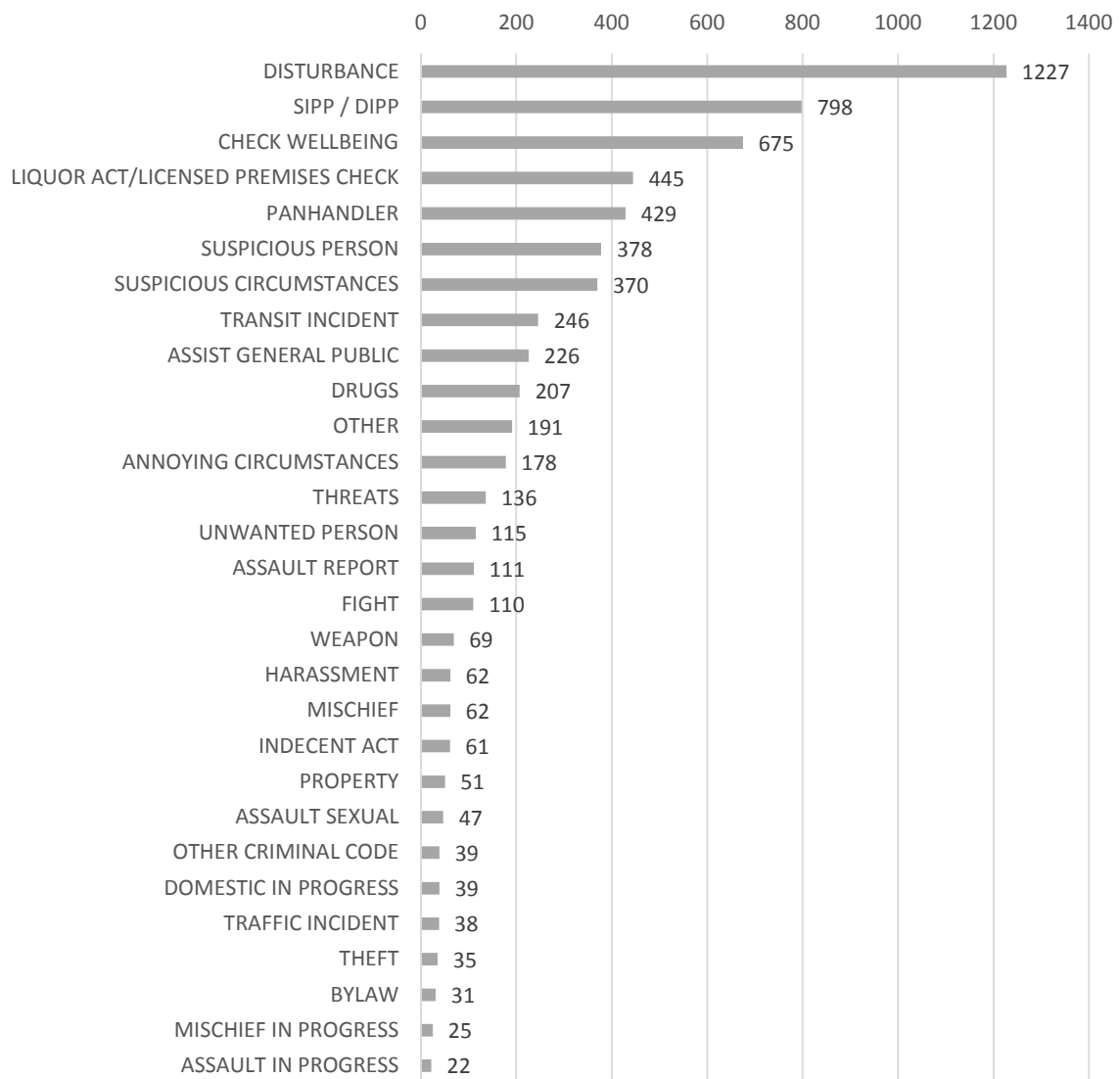
Figure 17. Police Files by 24 Hour Period by Line: January 2014 to December 2016



There were 1,171 instances (17 per cent) between January 2014 and December 2016 where Chatterbox calls were within 30 minutes of each other (the average conversation was calculated at 29 minutes). This might pose a challenge to the system as multiple calls received by the program have been known to slow down the processing of text messages during conversations (see Section 4.3).

Ten types of calls accounted for nearly four-fifths (77.9 per cent) of the police calls for service (see Figure 18). These included (causing a) disturbance, SIPP/DIPP (state of intoxication in a public place/drunken in public place), check wellbeing, panhandler, suspicious person, suspicious circumstances, transit incident, assist general public, and drugs.

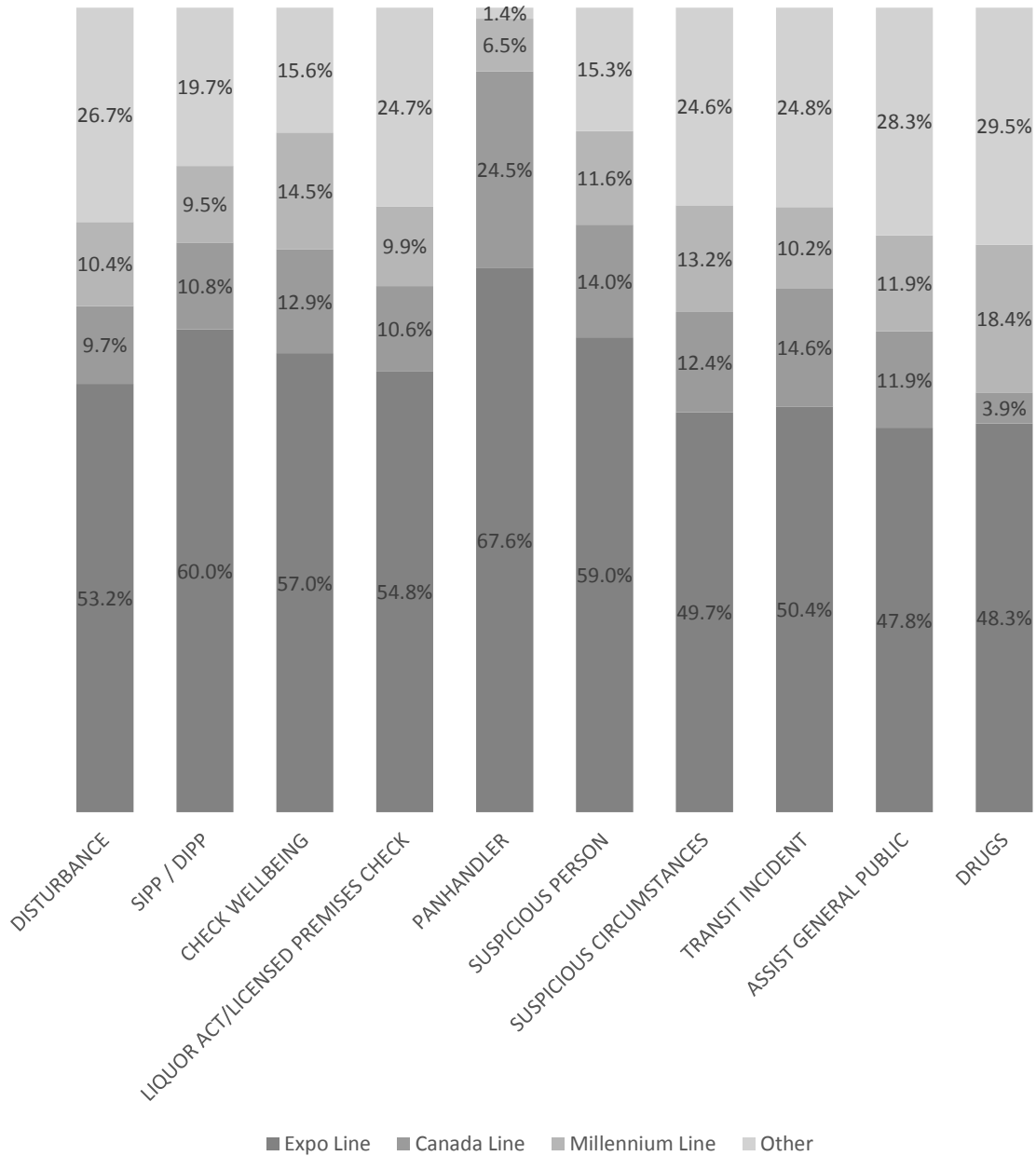
Figure 18. Police Files by Call Type: January 2014 to December 2016



The top 10 call categories were analysed by line type to determine which transit lines received the most number of calls. As expected, the Expo Line received the majority of the calls for each of the top 10 call types ($\chi^2(27) = 263.24, p < .05$) (see Figure 19). In effect, there was a relationship between the transit lines and the types of calls. Chatterbox calls

classified as disturbances occurred on the Expo Line 53.2% of the time (see Appendix E for complete list).

Figure 19. Top 10 Call Type by Line: January 2014 to December 2016



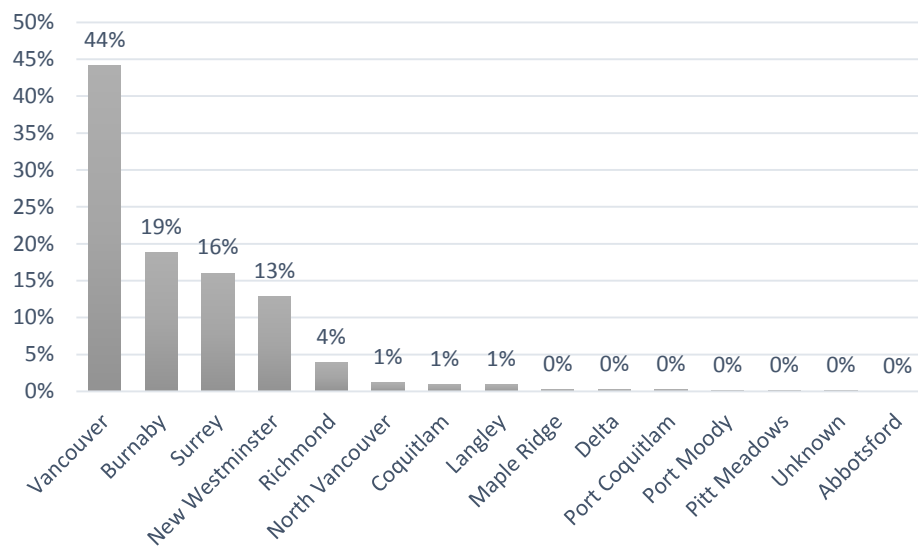
When reporting various types of criminal activities and social disorder, Chatterbox users were most likely to report annoying circumstances (31.4 per cent) (see Table 4). Furthermore, passengers reported harassment by others using Chatterbox an additional 31% of the time (see Appendix E for complete list). This was supported by the public survey where respondents stated they appreciated the anonymity that Chatterbox provided to report incidents that violated their ability to take public transit safely and incident-free.

Table 4. Top 10% Calls Reported Via Chatterbox: January 2014 to December 2016

File Type	Total	SMS	Percentage
ANNOYING CIRCUMSTANCES	566	178	31.4%
HARASSMENT	201	62	30.8%
LIQUOR ACT/LICENSED PREMISES CHECK	1,496	445	29.7%
DISTURBANCE	4,178	1,227	29.4%
BYLAW	114	31	27.2%
PARKING COMPLAINT	50	10	20.0%
CHECK WELLBEING	3,633	675	18.6%
SIPP / DIPP	4,383	798	18.2%
SUSPICIOUS CIRCUMSTANCES	2,211	370	16.7%
ANIMAL	104	17	16.3%

Of note, the top four cities accounted for 92% of all calls for service generated by Chatterbox (see Figure 20). These cities were Vancouver, Burnaby, Surrey, and New Westminster. Vancouver had 44% of Chatterbox police files, which was comparable to the overall percentage of Transit Police files at 45% or 28,938 files for the period of January 1, 2014 and December 31, 2016.

Figure 20. File Breakdown by City: January 2014 to December 2016



One of the most noticeable and surprising aspects with the implementation of Chatterbox has been the increased reporting of traditionally low-reporting criminal offences such as sexual assaults. The difference between the statistics for 2013 (the year Chatterbox was launched) and 2014 is apparent as the reporting of sexual assaults doubled (see Table 5). Chatterbox was used to report sexual assaults in 47 cases between January 1, 2014 and December 31, 2016.

Table 5. Reporting of Sexual Assaults

Year	Number of Sexual Assaults	Overall Files	% of Files
2012	44	18319	0.240%
2013	54	16428	0.329%
2014	127	20181	0.629%
2015	149	23145	0.644%
2016	147	21138	0.695%

In summary, since its introduction in December 2013, statistics have demonstrated that Chatterbox has had an effect on reporting of crime. During a 19-month period (May 2014 to November 2015), 72% of all Chatterbox calls were converted to police investigations. According to the data collected from PRIME, 10% of all police files were generated as a result of reporting through Chatterbox. Peak reporting times appear to be at the beginning of the afternoon rush and trailing off into the late evening hours. Over three-quarters (77.9 per cent) of the police calls reported using Chatterbox were attributed to the behaviour and actions of other passengers, and over half (54.2 per cent) of police files took place on the Expo Line.

4.3 What Dispatchers Say

Dispatchers were asked about their years of service as a dispatcher and how many of those years were as an employee of Transit Police. The average number of service was 9.3 years with the most experienced dispatcher having 18 years and most junior dispatcher having 1½ years of service. The range of years of service at Transit Police ranged from just a few months to two dispatchers having 10 years of experience. Participants averaged just under four years as Transit Police employees.

When asked how the nature of the complaints had changed since the implementation of the program, the five senior dispatchers who had been with the police agency since the implementation of the program had mixed answers. One dispatcher felt that the calls were “getting more in-depth complaints instead of your typical complaints about a man with a bike during in rush hours [bicycles are prohibited on the Expo and Millennium lines during peak periods, TransLink, 2016]”. The dispatcher continued to

comment that the calls for service were more serious in nature, such as sexual assaults and uttering threats offences. Another dispatcher felt that there was an increase of “in-progress” incidents that including witnesses to unwanted groping of female passengers and drinking on the buses. One dispatcher remarked that there were more complaints due to the ease of using Chatterbox, “whether they are valid or not”.

Only one of the nine dispatchers were involved in the implementation of Chatterbox. A senior dispatcher was selected to become part of the implementation team that travelled to the Abbotsford Police Department to gather information on the Abbotsford Police Department’s version of Chatterbox. One other dispatcher was asked to provide input on the types of scripts for the pre-programmed comments.

When it came to training, the dispatchers received little or no training at all on Chatterbox. Those whom indicated they had have received training mentioned the instruction was incorporated as part of their overall training as a new employee. The training that was received was largely technical in nature. The dispatchers were shown how the program worked, when a new message was incoming, and how to respond to the complainant. One issue with the training was a lack of information on how to communicate with users through text. One dispatcher was concerned that the Chatterbox text messages between the person on transit and the dispatcher could be uploaded to an online forum for public display for others to comment and criticize.

When it came to training, most dispatchers had some concerns about the length of the training, which was between five and ten minutes in length. The program itself was “a pretty straight forward application to use”, yet, some of the dispatchers warned that there

may be a need for more guidance on “how to respond to people with certain situations”. One dispatcher pointed out that there should be “more training to cautions as to texting to the public what we are allowed and not allowed to say.” It was interesting to note that dispatchers were concerned with the ability to search PRIME for the entity associated with the phone number from Chatterbox, specifically whether this was an acceptable method of conducting a reverse look-up of phone numbers.

The dispatchers all described the process of handling a Chatterbox call in a similar fashion. During their shifts, all dispatchers in the OCC have the program running in the background on their work computers. When a text message comes in, the orange Chatterbox text bar begins to flash indicating a new conversation. The dispatchers will decide among themselves who will take the conversation. Typically, the dispatchers that are operating the information radio channels (these channels conduct querying functions for police officers) will be the first assigned to the Chatterbox conversations.

Once a dispatcher is assigned to the conversation, the operator begins to assess the call to determine whether it requires the attention of TransLink employees or the Transit Police. If the conversation is considered to be a police file, the dispatcher will start to ask the user a series of questions to obtain information. The texter will be asked to provide the train number of a SkyTrain or the coach number of a bus, description of the suspect, and if the suspect is still in the area. Once the dispatcher obtains all the necessary information, the operator will request the name, address, and birthdate of the complaint. To conclude the conversation, the dispatcher will thank the texter for using the program and contacting the Transit Police.

If more than one conversation comes through Chatterbox at the same time or while the dispatcher is engaged in another Chatterbox text, the dispatcher may choose to operate both conversations. The choice to deal with multiple conversations simultaneously depends on the complexity of the issue. However, most participants stated that the dispatchers often shared the responsibility of distributing the Chatterbox conversations. The principle issue associated with having several conversations at once was that the program tended to slow down. Several dispatchers mentioned that the ability to receive and send text messages decelerated as the number of conversations increased.

The decision to create an accompanying police file for a Chatterbox conversation depends on the nature of the call. As described by one dispatcher, “no call too small”. The majority of the calls were assigned to Transit Police officers, unless the conversations were about technical transit issues, scheduling concerns, or liquid spills such as overturned coffee cups or pop drinks. When a dispatcher was uncertain whether the police should be dispatched to a call, the dispatcher would contact the patrol watch commander to review the information and decide whether police should be assigned to investigate.

When it came to asking for the complainant’s contact information, most dispatchers agreed that the majority of Chatterbox users were willing to provide it. Some individuals do ask why the police would request such information. Once the dispatchers explained that the information was not shared publicly, and that it was needed that so the police could conduct a follow-up investigation if necessary, this placated many complainants. Several dispatchers noted that a small percentage of individuals become scared when they are

asked to provide their information and stop answering the dispatcher's text messages altogether.

One of the options of the program is to allow dispatchers access to a list of pre-programmed comments. These statements are some of the more commonly used text messages, and are used to assist the dispatchers in replying to complainants. One participant mentioned that the comments were useful for keeping the emotion out of the conversation, particularly when the end user is becoming belligerent or argumentative. However, almost all of the participants felt that some of the comments were too "canned" or "impersonal". Several dispatchers mentioned they had their own writing style and preferred to type out their own messages.

Dispatchers remarked on the variety of different calls that were received through Chatterbox. The issues that were reported ranged from minor issues, such as a suspicious package left on a SkyTrain, to high priority calls that included physical fights between passengers. A major theme was that many Chatterbox calls were about the anti-social behaviour of transit riders, included passengers drinking open alcohol while riding transit, individuals panhandling for spare change at transit stations, and persons exhibiting mental health issues.

Participants were asked to comment on the amount of information retrieved from Chatterbox conversations compared to traditional calls. Overall, the dispatchers felt they obtained the same information regardless of the method. Yet, two of the highlighted drawbacks with Chatterbox were that it took longer for the dispatchers to ask the same questions that are quickly verbalized over the phone, and that the emotion and urgency

heard in a complainant's voice during a phone call was lost when the same reporting was conducted over text message.

The majority of the dispatchers felt that the complainants were more likely to report an incident as it was unfolding as a result of Chatterbox. It was surmised that the program provided a degree of secrecy and convenience that dialing a phone number and contacting police agencies did not. It was for these reasons that the participants also believed that people were more likely to report criminal offences and anti-social behaviour. At least three participants mentioned that the anonymity of Chatterbox probably had a positive effect on crime reporting.

Dispatchers either loved or hated the program. Those who liked Chatterbox stated that they understood that the public appreciated the ability to contact the police without drawing attention to themselves. The program was useful as it gave people different options for reporting crime and was "effective in catching people". Participants that opposed the program did so because the length of the text conversation was much more extensive compared to a phone call, the lack of control dispatchers had during the conversation, and the slowness of the program itself.

At the end of the interview, participants were asked to describe both the positives and negatives of the program. One of the advantages that dispatchers mentioned was that Chatterbox contributed to the Transit Police receiving more calls during the period when the incident was still in progress and when the suspect was still on scene. Of note, it was not possible to determine whether this increased the chances of duplicate files being created for the same incident. Several individuals referred to the fact that transit passengers

can report issues more discretely, and thus reducing the risk that they themselves would become a target of the offender. Dispatchers also appreciated that using the program allowed them to multi-task between various activities.

The main drawback about the program was that it was comparatively slower than speaking with someone over the phone when trying to collect the necessary information. This was because of the belief that it was difficult to get information from complainants through text messages and that the technology was sluggish. Depending on the strength of the user's cell phone carrier, dispatchers have noted some text messages received from complainants have error messages threaded throughout the message or there was a delay in when the message was sent.

Of note, even with these real limitations and concerns, overall, dispatchers stated that they would recommend the Chatterbox system to others and wanted to continue to use it. Several dispatchers alluded to the fact that the Transit Police maintained its own OCC and could handle the number of calls that Chatterbox generated. This was important because it was believed that if the same program was available through E-Comm, the dispatchers and various emergency services would be overwhelmed.

Generally, the dispatchers appreciated the safety aspects that Chatterbox provided to transit passengers, despite the additional hardship of processing a Chatterbox conversation. It was noted that the dispatchers felt a sense of frustration with the overall length of the conversation compared to a phone call, delays in technology and missing text messages, and impersonal canned text messages. However, a number of dispatchers have adapted to the program, including modifying the canned comments to make it more

personalized, filtering between customer-service related conversations and calls for police service, and multi-tasking between conversations and other job-related activities.

4.4 What Police Officers Say

When asked what they knew about Chatterbox, there was a wide range of answers provided in the police officer focus groups. Some officers admitted that they did not know very much about the service, if anything at all. One police officer commented, “[w]hat’s Chatterbox?” while another one said, “I don’t know much about it.” Others gave thoughtful answers, with one replying, “[it is] where the citizens riding the train can report the complaints anything that is troubling... when they don’t want to talk on the phone” and “it’s a way for people to make an anonymous complaint”. Many officers agreed that there were some important challenges with Chatterbox, such as missing or delayed information, difficulty in following up with complainants, and the lack of contact information.

Police officers were asked to comment on how they were notified about Chatterbox. The police officers took this question to mean one of two things; how each police officer learned about Chatterbox for the first time or how each police officer was notified that the dispatched call was generated through Chatterbox. As a result, a wide range of explanations were provided. Many police officers explained that they were not informed of the introduction of Chatterbox until they learned about it for the first time when the dispatchers had assigned them to a call for service. It was only when the officer “heard it on the radio” from the dispatcher was when the police officer had become aware of the program.

One member remarked that his “very first Chatterbox call was a woman who used the text line to complain about the discourtesy of a passenger who needed to remove her shopping bags from the seat”. Other police officers identified marketing as the method to their introduction to Chatterbox. One police officer stated that they first learned about it “from the fancy little card that they [marketing] made up”. Additional marketing techniques included signage on the transit system, such as posters “inside the trains”. Another member learned about the program through media coverage. Other police officers indicated that they had been educated about the program through “in-house training” and internal documents.

Training on Chatterbox for police officers appeared to be inadequate. As one member pointed out, they “never receive[d] any direction about how it operates or how it works”. One police officer stated, “I thought there was a physical box.” Another member commented, “I don’t actually know about it...70% SMS text turn into files...I think I read it somewhere.”

Police officers were asked to offer their opinions on the differences between a Chatterbox call and when the complainant had used other reporting methods, such as phoning Transit Police or approaching a transit employee. A major difference outlined by the police officers was that they felt the Chatterbox calls were more customer service complaints. A police officer referred to it as the “customer service complaint line”. Another member mentioned “most of the time they [the calls for service] are not police related.” As an aside, it is important to note that, during the focus groups, members were frustrated that they were directed to respond to offences listed under the South Coast

British Columbia Transportation Authority Act rather than exclusively criminal offences. However, as the Transit Police, members are required to enforce the South Coast British Columbia Transportation Authority Act (Transit Police, 2017).

Another theme that was shared by the police officers was that the information regarding the call for service was slow in forthcoming. “Details are very slow in coming in”, “time delay is different”, “lack of information”, and “delay of the information” were some of the common complaints. One police officer commented, “[it is] tough to know if the person is communicating with you.” Other members noted that there is a loss of sense of urgency that a dispatcher would get with speaking with a complainant. While on the phone, the dispatcher can monitor the complainant’s tone to determine the seriousness of the call. With Chatterbox, there is no determination of how serious the complaint was.

When asked if Chatterbox has changed the type of calls for service received and the reasons for this, the major theme was surrounding the increase of low priority calls. As one police officer described it, “every little shit thing”. Other comments included, “more trivial stuff...guy drinking on the bus going out to UBC”, “responding to calls that we might not have responded to previously”, and “a lot of trivial calls that people wouldn’t have called up before”. Several police officers believed that the dispatchers were “creating files that normally wouldn’t be a call”, while others stated “dispatchers are doing a good job of filtering it [non-police calls] out”.

Many police officers recognized the importance of having Chatterbox as a method available for passengers to report things in real-time. Numerous police officers believed that the types of calls for service had changed to reporting a crime as it was happening.

One member remarked, “we are getting more calls through Chatterbox where it might not have reported it at all”. Another one stated, “[there is] more calls where people would be afraid to call before.” However, it was not possible to determine the degree to which this had a direct or indirect effect on solve rate.

Police officers had different opinions on how Chatterbox affected their ability to conduct investigations. Some police officers were frustrated with the general lack of information more commonly associated with Chatterbox calls for service. One member stated, “it’s frustrating for the lack of details...asking the dispatchers for more questions...chasing the texter around”, while another one described Chatterbox calls as “fragmented information”. Other complaints included “pushing the dispatcher to get the information”, “sometimes the information comes in too slow or never shows up, and “there’s less information...you have to gather more.”

Other police officers believed that Chatterbox provided members with more information. One member remarked that it gave the police officers a phone number to contact the complainant to ask more questions. Sometimes, when a complainant approached a SkyTrain Attendant to report something, they would not provide their contact information. Another police officer indicated that they were using Chatterbox calls to provide evidence for forwarding charges – “if you are putting charges forwarded, you can pull the text...immediate documentation...like what was going through person’s mind at the time”.

The experience of police officers with Chatterbox was largely mixed. Some participants felt that their experience had been positive and they appreciated that the

program allowed transit users the discrete ability to contact the police, especially if the individuals did not feel comfortable dialing 9-1-1. However, those who had negative encounters believed that many of the calls were frivolous in nature resulting in officers being interrupted during more urgent police duties.

When it came to the “real-time” aspect of crime reporting, participants believed that the general public was quicker to contact the Transit Police through Chatterbox than other reporting methods. It was also believed that users were more likely to report a criminal offence using Chatterbox as the criminal offence was unfolding. Moreover, the initial text message conveying distress appeared to be quicker. However, the downside of the program was related to the on-going reporting of the offence, as some participants felt that the flow of information slowed down because it relied on the texting abilities of the complainant and/or the dispatcher.

Still, police officers agreed that they would recommend Chatterbox with certain caveats. As one participant commented, “I would recommend it for reporting for disconcerting incidents as long as it’s properly vetted”. Another police officer believed in the program because it “gets people to talk to us more”. One main focus for several members was that the program should be promoted to the public, not as a replacement to 9-1-1, but as an alternative method that gives the general public a discrete method for contacting the police without placing them in danger.

When asked how to improve Chatterbox, there were several recommendations. One suggestion was to introduce the program into the local school systems. One member recalled a file where children on a transit bus had been filmed by an unknown male, and it

was suggested that the program be introduced to school-aged children while riding on transit. Several police officers put forward the idea of receiving pictures and videos from complainants as it would enhance their ability to conduct investigations. Advertising and marketing was another area that police officers wanted to see improvements. Participants wanted better marketing to create greater awareness among users about the types of information that are important to the police, such as location of the incident, a description of the suspect, and how the user can locate the bus or SkyTrain identification number. While this could be considered a training issue for dispatch, members appeared to want the users to provide the necessary information to the police in the first instance, rather than having the dispatchers spend time asking questions for basic but important information, which they believed could be achieved by better educating the public and transit users on the type of standard information observers should provide to the police. Several officers proposed the use of a template format be advertised for the general public to follow when contacting the Transit Police with the use of Chatterbox.

Two other suggestions included the use of Global Positioning System (GPS) and having a police officer assist dispatchers and filter the types of calls. Police officers wanted to have the ability to use GPS to find complainants in the similar manner to the *Find My Phone* app, which is a tool that provides owners with the location of a stolen/lost cell phone using global positioning software technology (Microsoft, 2016). The other suggestion was having a police officer review the calls before the police are dispatched to an incident. This would assist dispatchers on how to determine the best course of action in regard to dispatching officers to a call.

4.5 Summary of Research Findings

The research findings highlighted several key themes. The most important finding of the research was that Chatterbox has become a useful and integral part of the service that the Metro Vancouver Transit Police offers to transit passengers. Despite the many calls for service for the “bad behaviour” of passengers, both police officers and dispatchers recognized that the SMS texting program provided a useful tool for reporting criminal offences and social disorder. As one police officer stated, “one good file wipes out the 100 shitty files”. The users of the program appreciated the discreteness that Chatterbox offers through the ability of contacting police without becoming directly involved.

This premise becomes clear through the analysis of the statistics associated to Chatterbox. The average number of Chatterbox conversations per month was 268 conversations with 72% of those conversations converted to police files. The reporting of criminal offences through Chatterbox accounts for, on average, 10% of all Transit Police files. Just over half (54 per cent) of police files generated from Chatterbox occurred on the Expo and Millennium Lines, despite these two transit lines only accounting for 21% of the overall ridership in 2015. Vancouver experienced the greatest number of crime files, and it was believed that a combination of the city and the location of the Expo and Millennium stations effected the crime rates on these lines. The top three criminal offences reported using Chatterbox was related to the behaviour of passengers as a result of intoxication and mental health concerns.

According to the public online survey, the composite profile of the average Chatterbox user was 35 years old, female, primarily utilized SkyTrain, uses transit on a

daily basis, had used the Chatterbox program a minimum of once in the previous 12 months, had done so to report an intoxicated or obnoxious passenger, believed that Chatterbox would be easier to use than other reporting methods, would recommend the program to others, and had learned about the program from advertisement on the transit system.

The most unexpected outcome from the research was the increase in reporting levels of one of the most under-reported crimes, sexual offences. Between 2013 and 2014, the number of sexual assaults that were reported and investigated by Transit Police had doubled. In the three years after the program was initiated, 47 sexual assaults had been reported to Transit Police using Chatterbox. The increase in reporting of serious crimes such as sexual assaults has not gone unnoticed as several dispatchers had remarked during the individual interviews that they had observed a rise in the reporting of sexual offences through the use of Chatterbox.

The concept of anonymity was a common theme throughout the research. During the focus groups with police officers, several participants alluded to the fact that Chatterbox allowed individuals to contact the police and make a complaint without drawing attention to them. This fact was reiterated by the online public survey. One-third (34 per cent) of participants had used Chatterbox in the past because they believed the program was anonymous or they did not want to other transit passengers to know that the police had been contacted.

It may be for these reasons that Chatterbox users were more reluctant to provide personal information, such as their name, birthdate, and home address. Most of the

dispatchers referred to the fact that users eventually supplied the contact information after asking the dispatchers for the reasons they were being asked to provide their personal information. Of note, a small percentage actually stopped answering the dispatcher's text messages when they were asked for their personal information. This concern was reinforced by the comments provided by participants in the online survey. As one respondent wrote, "I wish we didn't need to provide name, address and birthdate. Feels like our concerns are not valid unless it is legitimized with ID. I have nothing to hide but it may deter future people from reporting if they can't be anonymous."

Education and training of Transit Police employees appeared to be an important and integral function for understanding how Chatterbox operates. Although the training for dispatchers does not have to be particularly lengthy, it is necessary for dispatchers to have some form of instruction to ensure continuous support and success of the program. Providing education for police officers should be conducted to garner an appreciation for the program and to understand the purpose it serves for the general public to report crime. Many police officers were under the impression that dispatchers were not working fast enough to obtain vital information and that the dispatchers were purposely dispatching police officers to trivial incidents. Through education, these beliefs could be mitigated or corrected.

Similarly, marketing and advertising of the program is needed to better educate the public about Chatterbox. Both police officers and dispatchers stated that users needed to understand that Chatterbox should not be utilized to replace calling 9-1-1 in the event of an emergency, nor should it be used for criminal offences that occur away from the transit

system. Dispatchers were frustrated that they had to continuously direct complainants on how to locate the coach number of the bus or car number of the train during a conversation. Chatterbox users indicated that they often had difficulties locating the text number of 8-7-7-7-7-7 on various conduits on the transit system.

Another topic that emerged from all three groups was the ability to send and receive multi-media files, such as cell phone videos and photographs. The public is eager to assist the police with the recording of events as they unfold, and capturing the description of an offender is as simple as snapping a photo with a cell phone and sending the image to the police. Obtaining a detailed description of a suspect through text message can take a lot of time to extract information from a complainant. Dispatchers would like to have the capability of forwarding images and videos to police officers as they respond to a call. During focus groups, police officers said that having the ability of the public to provide real-time videos and photos would improve their capacity to do their job.

Lastly, there seems to be a discrepancy among the groups as to how quickly the program worked. For example, the majority of Chatterbox users remarked how quickly dispatchers were to respond to their text message. This notion is substantiated by the statistics gathered on the program indicating that, on average, dispatchers responded to the initial text message in 1:05 minutes. The frustration began when more information was needed for police officers when they responded to a criminal incident. The time delay was dependent on how quickly the complainant could text the information to the dispatcher. As relayed by one dispatcher, "I can ask in 3 seconds over the phone, but with text, it's

another text and another text”. As a result of this complication, the average time of a conversation was over 29 minutes.

Chapter 5: Recommendations

5.1 Education and Training

One of the predominant themes that emerged from conducting focus groups with police officers was the lack of training and education of the program. There were a few police officers that had little or no knowledge of the program. Many police officers did not know how the program worked. It was interesting to note that police officers that were new to the organization had some working comprehension of the program. This suggests that there may be some training conducted during the pre-employment period.

The importance of training and educating police officers on the program is paramount. Most police officers understood that one of the major concepts of the program was to provide the public with a discrete method of contacting law enforcement when public disorder or a criminal offence was observed. Yet, police officers felt that dispatchers often assigned them to “nuisance” or “frivolous” calls. It was not until they were explained the procedures used by dispatchers to evaluate the police worthiness of the complaint that the police officers appreciated the decision-making process.

It is this mentality of “throwing the work over the fence” that needs to be discussed. It is recommended that each patrol squad have a training session of 10 to 20 minutes. The training session would include a PowerPoint presentation illustrating the origins of Chatterbox, how a text conversation is handled by the dispatchers, and statistics of police calls generated from Chatterbox conversations should be discussed. A suggested presenter would be a senior dispatcher as he or she would be in the best position to explain the various issues faced by dispatchers, including the length of time spent addressing a text

conversation versus a phone conversation, interpreting various text comments, and obtaining contact information from the user.

5.2 Advertising and Marketing

One area that all three groups commented on was the need for increased advertising and marketing for the public to understand that Chatterbox was not a “catch-all” for all types of criminal offences and social disorder. Many of the participants felt that the marketing of the program needed to include educating transit users as to the various situations that Chatterbox is most useful in addressing. In effect, the scope of the program needs to be clearly defined in terms of what Chatterbox is to both the Transit Police and the public. Part of the concern was that passengers were using the program as a substitute for dialing 9-1-1 in an emergency situation. The length of time needed to text information versus the amount of time it took to talk to a 9-1-1 call-taker only increased the risks for those involved. Better marketing can inform the public as to when to contact 9-1-1 directly and when to utilize Chatterbox.

It is recommended that marketing include additional education for users as to what kind of information they might be asked to provide by dispatchers or the police. Moreover, the marketing should incorporate instructions on how to provide dispatchers with the location of the incident and diagrams on how to locate the coach number of the bus or the car number inside the train for SkyTrain and Canada Lines. Additionally, advertising campaigns need to inform Chatterbox users that they may be asked to provide their personal information. Many of the participants felt that the discreteness of the program also equated

to being anonymous and did not understand the need to give their name and address during conversations with dispatchers.

5.3 Revised Canned Comments

During a conversation with a Chatterbox user, dispatchers have the choice of using pre-programmed comments for some of the most commonly asked questions. When asked about the canned comments, some dispatchers felt that the pre-programmed comments were particularly useful when they were handling several calls at the same time, and it allowed them to quickly respond using standard comments. However, other dispatchers felt the canned responses were impersonal, stale, and needed to be updated.

Several of the participants suggested that the comment on descriptors of the suspect needed to be briefer and include more information. One example was, “Can I have the descriptors of the person, please, race, age, height, weight, clothing.” Another issue was regarding the confusion of obtaining the train number or coach (bus) number that the Chatterbox user was calling about. One participant stated that she used the following comment to direct the user to the number- “The id of the train number, it should be three numbers at the back and the front of the car.”

It is recommended that a working group of select OCC dispatchers and supervisors be created to evaluate the current standard list of canned comments and develop, accept suggestions from other dispatchers, and create an updated list of standard comments that would appeal to a wider range of dispatchers. Some of the existing text messages could be modified to the suggested comments identified during the dispatcher interviews, such as:

- “What does the person look like – gender, nationality, age, height, weight, clothing.” (84 characters)
- “What bus/train number are you on? The number is at the back and the front printed in black.” (91 characters)
- “Thank you for using Chatterbox. We appreciate you bringing this issue to our attention.” (87 characters)

5.4 Multimedia Submissions

One of the emerging themes from conducting research with the dispatchers, police officers, and the public was the ability to send and receive multimedia files, such as cell phone video and photographs. Participants from the dispatcher interviews conveyed a sense of frustration as to the length of time that was required to obtain suspect descriptors over text messages. Police officers felt that receiving pictures would greatly assist in locating and identifying the offender in police investigations. Several participants from the public survey commented they wished Chatterbox allowed them to forward pictures and video to aid the police.

There is some concern with whether the current program used for Chatterbox could be modified to accept such files. Several dispatchers mentioned that when there was more than one text conversation occurring at once, the program almost halts, and the time between receiving and sending text messages increases. The speed of the program would be negatively impacted if photos or videos were attached to the text message. Another issue was that, at times, some text missing would appear during a Chatterbox conversation. It is unknown what causes this issue, but it is possible that there is some technical glitch with the program. Determining whether the program is technologically capable of

receiving electronic files is outside the scope of this thesis but further evaluation of the program is recommended.

A search on the Internet found that there are police departments that deploy SMS texting programs with the option to send videos and photographs. For example, the Metropolitan Police Department in Washington, DC, allows residents to text the police at 5-0-4-1-1 with tips of criminal activity. The application allows users to send information along with cell phone pictures and videos (Metropolitan Police Department, n.d.). It is recommended that the Transit Police evaluate the ability of the current Chatterbox system capabilities to determine whether the program is able to receive multi-media photographs and video files. If possible, the program should be modified to allow for the acceptance and storage of photos and video. If the existing program is not capable of being adjusted to allow for attachments then an evaluation should be considered to include a program that would allow the Transit Police dispatchers to accept video and photo attachments during the text conversations.

5.5 Dedicated Dispatcher and Police Officer

As determined from the individual interviews with the dispatchers, all of them have the Chatterbox program running live on each of their work computers. When a user initiates a text conversation, the program begins flashing on the task bar at each dispatcher work station. The dispatchers will then discuss among themselves who is available to accept the conversation, and the selected dispatcher will then answer the complainant and contact any necessary services to address the complainant's concern.

As discussed above, the average conversation was 29 minutes. This means that a dispatcher had his or her attention focused on the conversation and responding to the user for that amount of time. Several dispatchers expressed frustration with having to respond to Chatterbox conversations while attempting to perform their other regular duties. Given this, it is recommended that a dedicated dispatcher be assigned to address conversations as they come in through the Chatterbox program. The main advantage of having a dedicated dispatcher is the employee would be responsible for all functions of Chatterbox, including assembling reports for senior management. If there is more than one conversation occurring at the same time, the additional conversations would be handled by the dedicated dispatcher or by another designated dispatcher.

Similarly, it would be beneficial to have a police officer assigned to assist in the OCC with a particular focus on filtering Chatterbox conversations. Several police officers commented on how often they felt the police files generated from Chatterbox conversations were not police focused calls, such as a passenger's bag taking up an additional seat during peak travel hours. Many participants from the focus groups believed that the police were assigned to intervene on customer service related calls, rather than genuine police matters. Even dispatchers admitted that, at times, the Transit Police patrol watch commander was consulted to determine whether a police file should be generated and assigned to patrol officers based on the information from the Chatterbox conversation.

5.6 Additional Public Feedback

Acquiring continuous feedback from the public is an important function of any organization. As a result of the online survey, the public were able to provide invaluable

comments and opinions on the program. However, the online survey was a one-time method of obtaining data on the users of Chatterbox for research purposes. Given this, it is recommended that Transit develop a method to allow the public to provide ongoing comments and opinions about their experiences, challenges, success, and recommendations for Chatterbox to assess the success of the program from the perspective of its users.

Many participants expressed an interest as to how the public felt about the program. A number of dispatchers and police officers asked about the online public survey and what was the overall response from the ridership. Acknowledging the hard work of dispatchers and police officers for responding to calls resulting from Chatterbox is imperative to employee satisfaction. Both Transit Police dispatchers and officers have a vested interest in ensuring the program is successful and feedback is a significant part of ensuring this. It is recommended that the Transit Police implement an ongoing feedback mechanism that allows users of the program to provide comments and criticism. The concept would include a process that would be similar to the online student research survey. At the conclusion of a conversation, the dispatcher would send a final text message that would direct the user to complete an online survey and/or feedback form. It would be part of the reporting responsibilities of the OCC to maintain and review the public feedback statements and report the comments to senior management of the Transit Police.

Chapter 6: Conclusion

The research from this study demonstrated that there is a real need for police departments to develop SMS texting programs to report non-emergency incidents. Yet, there were limitations with conducting this research, as well as numerous future considerations that need to be addressed.

6.1 Limitations

There were several limitations associated to this study. One of the drawbacks of the research was that the online survey depended largely on the public becoming aware of the survey in one of three ways - having used Chatterbox between May 17, 2016 and August 31, 2016, observed notification of the survey on the Transit Police website or received twitter feed about the link to the survey from the Transit Police Twitter account. Due to privacy concerns, users of Chatterbox prior to May 17, 2016 could not be contacted to obtain their permission to participate in the survey. Contacting early adopters of the program would have been useful as to obtain their perspective of the program.

Throughout the study, a number of limitations with the Chatterbox program itself were discussed by participants. Several individuals noted that text messages did not have a language translator option that would allow dispatchers to receive Chatterbox calls from non-English speaking passengers. This lack of capability meant that the program was not always accessible for all passengers using the transit system. Another issue experienced by the dispatchers was Chatterbox's processing time slowed down considerably when the dispatchers received two or more text conversations at once. The lack of a tracking program for determining how often this occurred also made it difficult to identify the

number of occurrences where the dispatchers had more than one complainant reporting the same incident.

The deficiency of knowledge and training by some police officers made it difficult to record their opinion of the program. Several police officers did not feel comfortable responding to some of the questions due to the lack of familiarity with how the program worked. Although the program had been implemented since 2013, many veteran police officers did not have a thorough knowledge of the program. In some discussions, newly employed members knew more about the program than their longer employed colleagues, possibly due to the result of pre-employment training.

Another area that was a detriment to the study was the lack of existing research. To date, there is little or no research available on the use of texting to report criminal behaviour as it is occurring. An increasing number of law enforcement agencies and emergency departments are using the technology, but there has been little research on the usefulness and functionality of texting. Additional research needs to be conducted to evaluate a variety of different areas, including if the discrete ability of texting a complaint about social disorder or criminal activity encourages individuals to contact the police, and whether it increases the amount of reporting for traditionally low-reporting offences, such as sexual assaults.

One limitation was associated to the classification of the Chatterbox calls according to location type, such as whether the call occurred on the train, on the bus, or on the street. Only when the Chatterbox call is converted to a police file and documented in PRIME is the call assigned a location type. The overall number of Chatterbox calls are not currently

reported into separate location designations, making it difficult to determine if the use of Chatterbox differs between transit types and being able to calculate the differences into meaningful statistics for analysis.

Due to privacy regulations, the researcher did not have access to the complainant information recorded from Chatterbox conversations. As a result, the composite characteristics of the average Chatterbox user were based on data provided by participants of the online survey. It is possible that the average user of the SMS texting program was vastly different than the average participant of the survey. It was the belief of many Transit Police officers and dispatchers that the technology would more likely to resonate with the younger generation.

6.2 Future Research Directions

The future of SMS texting as a reporting response to emergency services is emerging. The National Emergency Number Association (NENA) in the United States has defined this new future as Next Generation 9-1-1 (known as NG 9-1-1) and “an Internet Protocol (IP) based system comprised of managed Emergency Services IP networks (ESInets), functional elements (applications), and databases that replicate traditional E9-1-1 features and functions and provides additional capabilities. NG9-1-1 is designed to provide access to emergency services from all connected communications sources, and provide multimedia data capabilities for Public Safety Answering Points (PSAPs) and other emergency service organizations” (NENA, 2016, p.129).

As seen in the research presented above, there is a real desire for the public to provide not only information about criminal offences, but to supply digital images and

video of the offending behavior. Imagine the possibilities of having a member of the public capture a picture of a criminal offender, send it to police dispatchers, who can forward it to police officers as they rush to the scene of the crime. Invaluable information, such as cell phone video and photographs, could then be used to identify the offender while at the scene and allow officers to assess what happened.

In the aftermath of Stanley Cup Riots in Vancouver on June 15, 2011, the public was quick to provide the police with cell phone video and photographs that were taken that night. One month after the incident, the Integrated Riot Investigation Team amassed a staggering 1,500 hours of video, 15,000 images, and 3,000 individual video data files. The team of investigators received 4,300 emails regarding information in relation to various offences that had occurred that night (VPD, 2011). Although this was an event that had touched the residents of Vancouver and motivated citizens to assist the police through cell phone video and photographs, this demonstrates that the public is willing to provide multimedia evidence. If Chatterbox had the ability to accept such files, it would greatly improve the ability of Transit Police officers to investigate criminal offences.

As more police departments adopt this type of crime reporting, officials are recognizing that with the incoming of video and photo capabilities comes significant issues. These concerns include the collecting and processing of evidence, installing electronic infrastructure to capture and store multi-media files, and ongoing exposure to traumatic pictures and videos. With the compilation of video and pictures, police administration will need to develop policies and strategies. It is important for police investigations that the videos and pictures be handled in a matter that will satisfy exhibits

procedures for criminal court purposes. In addition to exhibit handling procedures, police agencies need to ensure that multi-media files are maintained and stored safely.

One area of unease is viewing multimedia files sent to dispatchers and the long-term effects of exposure of traumatic pictures and videos. In January 2017, advocates of Next-Gen 911 services advised the Canadian government that police agencies needed to be mindful of the impact that an influx of disturbing videos and pictures sent by witnesses and victims could have on dispatchers or those responsible for viewing this content. The private interest group, Canadian Interoperability Technology Interest Group (CITIG), have stated apprehensions about the lack of policies currently in place to handle the onset of such activity. The CITIG has stated that additional training will be required to handle the negative impact of dispatchers viewing such multimedia (Pedwell, 2017).

Senior management need to be mindful of consequences that employees may face with long-term exposure of such content. During a British study, 189 participants were subjected to several violent news videos and then gauged for Post-Traumatic Stress Disorder (PTSD) symptoms. Researchers determined that 22% of the participants were adversely affected by the violent nature of the videos. These individuals scored high on the PTSD clinical scale, despite not having prior PTSD symptoms and had only experienced the events by watching them online. Researchers stated that individuals, such as health care professionals, are more likely to develop PTSD symptoms as a result of indirect exposure to human suffering. This consideration is disconcerting because there is the potential for dispatchers to develop symptoms of PTSD due to constant viewing of multimedia images sent by the public (Nauert, 2015).

Another area that needs further examination is the legal implication of processing and storing multimedia files for evidentiary purposes. Once video or photographs are received by police, the images can be used to identify an offender and used as evidence for criminal charges. The handling of evidence must be conducted carefully as it can be challenged in court. There must be policies and procedures implemented to carefully handle the multimedia files so it meets the threshold of evidentiary value to support criminal cases. This may mean existing policies for handling video evidence will have to be modified to include video downloaded from SMS texting programs.

Not only do the handling of videos and photographs needs to be evaluated, so does the requirement of properly storing such items. Police officials need to account for electronic storage requirements necessary for warehousing videos and photographs. Other questions include which employees will have access to the files and how they will be transferred to the police officers for further investigation. Will the files be stored on DVDs or housed electronically on a central database? What about the need for back-ups in the case of an electronic failure? These are questions that need to be addressed in the event that SMS texting programs, such as Chatterbox, allow users to send photographs and video files.

The use of technology for reporting crime and social disorder is a newly emerging approach for police agencies to engage with their local communities. The SMS program, Chatterbox, has allowed the residents of Vancouver and local municipalities to communicate with the Metro Vancouver Transit Police in a unique, but discrete manner.

Yet, this thesis has outlined a number of issues and concerns that need to be addressed, including the ability to receive photographs and video, additional training for employees, and better marketing and advertising. Additional improvements to the program will only enhance the ability of the Metro Vancouver Transit Police to respond to crime on the transit system.

Appendices

Appendix A: Consent Letter

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Textg 4 Help: An Evaluation of Metro Vancouver Transit Police's SMS Texting Program

Letter of Informed Consent

Purpose/Objectives of the Study

I am a student in the University of Fraser Valley's Master of Arts in Criminal Justice program and I am conducting a study for my thesis on Chatterbox, Metro Vancouver Transit Police's SMS texting program. I am evaluating the program with the goal of determining whether it has improved the reporting of criminal activity and other social disorder on the transit system.

Procedures involved in the Research

The interviews/focus groups will take approximately 20 to 30 minutes of your time and will take place at your location of work in a private room. I will be typing out your answers using my personal computer and these documents will be stored using an USB stick (with password protection) and on the Metro Vancouver Transit Police network. The files stored on the network will be password protected and only I and my thesis advisors will have access to these files. The files will be held until December 31, 2017. You will be asked questions about Chatterbox, such as your experience with Chatterbox and how it has affected your work. Once I have collected the individual responses, I will be analyzing the data using a qualitative analysis program.

Compensation

Metro Vancouver Transit Police has authorized me to conduct the interviews and focus groups during your regularly scheduled shift while respecting shifting procedures.

Potential Risks

There are no anticipated physical risks to you as a consequence of participating in this study.

Potential Benefits

By participating in this study, you are assisting me in conducting ground-breaking research. SMS texting used for emergency calls and reporting of social disorder is a relatively new function of the technology and there is little or no research available. With this research, I hope to show how this technology is affecting victim or witness reporting of criminal activity or other physical and social disorder.

Confidentiality

All the data will be kept confidential and all responses will be anonymized as no individuals will be identifiable in the final thesis. The data will be stored electronically on a password protected USB stick and in a password protected Metro Vancouver Transit Police network location that only I and my thesis supervisors will have access to. The data will be held until December 31, 2017. I will not identify you individually in this study. If you are involved in a focus group, please keep anything that you hear from others confidential. Please remember if you participate in a focus group, we cannot guarantee that others here will keep your information you share completely confidential.

Participation

Your participation in this study is voluntary and you may withdraw at any time during this interview/focus group. If you decide to withdraw, please understand that information previously shared will have already been noted and cannot be retracted as we are keeping a non-identifying ongoing list of comments and the other participants will have heard your words. If you have completed the interview and would like to withdraw your consent, you may do so until November 30, 2016. In the cases of withdrawal, any **interview** data you have provided will be destroyed.

Further Information

If you have questions about the findings of this study or if you would like a copy of the final research report, please contact Sherri St.Cyr at sherri.st.cyr@student.ufv.ca or at 778-835-3491, or the senior supervisor for this thesis, Dr. Irwin Cohen at irwin.cohen@ufv.ca or at 604-504-7441.

Study Results

You may contact me if you wish a copy of the study. Data from the research may be used for future presentations and publications.

Consent Approval from the Department

The study has been approved by Inspectors of Operations (both East and West) with the Inspector of West Operations overseeing the study.

Questions or Expression of Concerns

For questions about the study, you may contact Sherri St.Cyr of the School of Criminology and Criminal Justice at sherri.st.cyr@student.ufv.ca or at 778-835-3491. If you have concerns about the ethics of this study, you may contact Dr. Adrienne Chan, Associate Vice President, Research, Engagement, and Graduate Studies at adrienne.chan@ufv.ca or at 604-557-4074. The ethics of this study has been reviewed and approved by the UFV Human Research Ethics Board.

By signing below, I agree to participate in this study, titled *Textg 4 Help: An Evaluation of Metro Vancouver Transit Police's SMS Texting Program*.

I have read the information presented in the letter of informed consent being conducted by Sherri St.Cyr of the School of Criminology and Criminal Justice at the University of the Fraser Valley. I have had the opportunity to ask questions about my involvement in this study and to receive any additional details.

I understand that I have the right to withdraw from the study during the interview/focus group and until November 30, 2016 and that confidentiality and/or anonymity of all results will be preserved. For questions about the study, I may contact Sherri St.Cyr of the School of Criminology and Criminal Justice at sherri.st.cyr@student.ufv.ca or at 778-835-3491. If I have concerns about the ethics of this study, I may contact Dr. Adrienne Chan, AVP of Research, Engagement, and Graduate Studies at adrienne.chan@ufv.ca or at 604-557-4074.

Name (please print)

Signature

Date

Name of Witness (please print)

Witness Signature

Appendix B: Online Survey

Metro Vancouver Transit Police's SMS Texting Program

The following survey is on the Metro Vancouver Transit Police's SMS texting program (87-77-77).

The aim of this survey is to better understand the use of the texting program and the reporting of incidents on the transit system. In addition, users will be asked about his or her satisfaction with their experience and recommendations for improvement of Transit Police's SMS texting program. This survey is being conducted as a part of a requirement for a Master of Arts program in Criminal Justice at the University of the Fraser Valley (UFV).

The benefit of this research is to provide a better understanding of reporting social disorder while using technology. If completing this survey has caused you to recall a traumatic incident, please call Victim Link BC at 1-800-563-0808 or victimlinkbc.ca. The ethics of this study has been reviewed and approved by the UFV Human Research Ethics Board.

For any questions about the study or would like a copy of the final thesis, you may contact Sherri St.Cyr of the School of Criminology and Criminal Justice at sherri.st.cyr@student.ufv.ca or at 604-515-8300 or the senior supervisor for this thesis, Dr. Irwin Cohen at irwin.cohen@ufv.ca or at 604-504-7441. If you have concerns about the ethics of this study, you may contact Dr. Adrienne Chan, Associate Vice President, Research, Engagement, and Graduate Studies at adrienne.chan@ufv.ca or at 604-557-4074. This study has been approved by Inspectors of Operations with Inspector of West Operations overseeing the project.

All the data will be kept confidential and all responses will be anonymized as no individuals will be identifiable in the final thesis. The data will be stored electronically in an anonymous database on a password protected computer that only the student and the thesis supervisors will have access to. The data will be held until December 31, 2017. You will not be identified individually in this study.

Participation in this survey is completely voluntary and anonymous. You may choose to discontinue this survey at any time. If you choose to discontinue the survey, it will be assumed that you have not consented to the survey and your survey will be removed from the study. Once you have selected the submit button at the end of the survey, you will have consented to the survey. Consent to the survey cannot be removed after this point. You must be 19 years old or older to complete this survey. The survey will take approximately 5 to 10 minutes to complete.

1. Have you ever used Transit Police's SMS texting program to report something?

- ☐ Yes
- ☐ No

2. In the past year, how many times have you used Transit Police's SMS texting program?

3. What have you used Transit Police's SMS texting program for?

(Please check all that apply.)

- ☐ To report a crime against a person (i.e. assault)
- ☐ To report a property crime (i.e. graffiti)
- ☐ To report an intoxicated or obnoxious passenger
- ☐ To report a mess or spill
- ☐ To inquire about scheduling (i.e. delayed trains)
- ☐ Other _____

4. If the Transit Police's SMS texting program was not available, what other means of reporting would have you used to report your concern in Question 3?

(Please check all that apply.)

- ☐ Called 9-1-1
- ☐ Approached a transit employee (Transit Police, SkyTrain Attendant, bus driver, etc.)
- ☐ Hit the silent alarm strip on SkyTrain or Canada Line
- ☐ Used the intercom service on SkyTrain or Canada Line
- ☐ Used the customer service phone in the stations
- ☐ Called TransLink customer service
- ☐ Other _____
- ☐ I would not have reported it.

5. On a scale of 1 to 5 (with 1 being very unlikely and 5 being very likely), are you more or less likely to report something using the Transit Police's SMS texting program?

6. Why did you use Transit Police's SMS texting program?

(Please check all that apply.)

- ☐ I did not want other transit passengers to know I was reporting something.
- ☐ I thought it was anonymous.
- ☐ I thought it was safer for me than calling the police.
- ☐ I thought it would be faster.
- ☐ I thought it would be easier than other reporting methods.
- ☐ Other _____

7. On a scale of 1 to 5 (with 1 being very difficult and 5 being very easy), how did you find Transit Police's SMS texting program to use?

8 a. On a scale of 1 to 5 (with 1 being very dissatisfied and 5 being very satisfied), how would you describe your level of satisfaction with the timeliness of the response to your text conversation?

8 b. Please explain your level of satisfaction.

9 a. On a scale of 1 to 5 (with 1 being very dissatisfied and 5 being very satisfied), how would you describe your level of satisfaction about how your text conversation was handled?

9 b. Please explain your level of satisfaction.

10. What was the estimated length of your text conversation?
(Please indicate estimated length of conversation in number of minutes.)

11 a. Would you use Transit Police's SMS texting program again?

- ☐ Yes
- ☐ No

11 b. Why or why not?

12 a. Would you recommend Transit Police's SMS texting program to others?

- ☐ Yes
- ☐ No

12 b. Why or why not?

13. How did you learn about Transit Police's SMS texting program?

(Please check all that apply.)

- ☐ Transit Police app
- ☐ Transit Police website
- ☐ Advertisement on the transit system
- ☐ Friend or family member
- ☐ Social media (i.e. Twitter, Facebook)
- ☐ This survey
- ☐ Other _____

14. In the future, what would you use Transit Police's SMS texting program for?

(Please check all that apply.)

- ☐ To report a crime against a person (i.e. assault).
- ☐ To report a property crime (i.e. graffiti).
- ☐ To report an intoxicated or obnoxious passenger.
- ☐ To report a mess or spill.
- ☐ To inquire about scheduling (i.e. delayed trains).
- ☐ Other _____
- ☐ I would not use it.

15. On a scale of 1 to 5 (with 1 being very unsafe and 5 being very safe), how does the availability of Transit Police's SMS texting program make you feel on the transit system?

16. How frequently do you use transit?

- ☐ Daily
- ☐ Weekly
- ☐ Monthly
- ☐ Rarely
- ☐ Never

17. What types of transit do you use?

(Please check all that apply.)

- ☐ Bus (Including HandyDart and Community Shuttle.)
- ☐ SkyTrain
- ☐ Canada Line
- ☐ Seabus
- ☐ West Coast Express

18. What gender do you identify as?

- ☐ Male
- ☐ Female
- ☐ Transgender
- ☐ Prefer not to say

19. What is your age?
(Please respond in number of years.)

20. How would you improve Metro Vancouver Transit Police's SMS texting program?

21. Comments/Concerns

Please feel free to provide more detailed information about your experience of using Metro Vancouver Transit Police's SMS texting program.

Thank you for your participation in this survey. If completing this survey has caused you to recall a traumatic incident, please call Victim Link BC at 1-800-563-0808 or victimlinkbc.ca.

Appendix C: Questions for Dispatchers

Interview Questions for Dispatchers

Training and Implementation

1. How long have you worked as a dispatcher? How long as a Transit Police dispatcher?
2. How has the nature of the complaints changed since the implementation of the program?
3. How were you consulted on the implementation?
4. What kind of training did you receive?
5. How long was the training for Chatterbox?
6. Do you feel the training was adequate? Why or why?

Process

7. What is the process of taking text message from the start of the conversation to action ie police attendance, etc.?
8. How do you monitor it or notified of an incoming Chatterbox conversation?
9. How do you decide a conversation becomes a police file?
10. What happens when you get more than one conversation at once?
11. Which of the dispatchers is using it?
12. How do you decide who works Chatterbox?

Text Conversation

13. How easy or difficult to is getting the complainant's contact information?
14. Do you think it is necessary to get this information? Why or why not?
15. Do you use the pre-programmed comments? Why or why not? What other pre-programmed comments would you like to see?
16. On average, how many text messages per conversation?
17. What types of calls come through texting program?
18. How much information do you get through Chatterbox compared to a traditional call?
19. How has this changed from before Chatterbox?
20. Do you feel that people are more like to text in a complaint as it is happening in real time as opposed to reporting it later on?
21. Do you feel that people are more likely to report criminal and related activity now that this program is available (i.e. do they feel it has had an effect on crime reporting?).

Personal Experience

22. How do you feel about Chatterbox?
23. What are the positives of the program?
24. What are the negatives of the program?
25. What issues have you had with Chatterbox?
26. Would you recommend Chatterbox to others? Why or Why not?
27. Additional comments.

Appendix D: Questions for Police Officers

Focus Group Questions for Police

1. What do you know about Chatterbox?
2. How do you know about Chatterbox?
3. What differences between a Chatterbox call and other types of transit related calls (e.g. the complainant has called in, the complainant has approached a SkyTrain Attendant, etc.) have you noticed?
4. Has Chatterbox changed the type of calls you have received? Why or Why not?
5. How does Chatterbox as a source of calls for service affect your investigation?
6. What's your experience with Chatterbox?
7. How do you feel about Chatterbox, in particular, the "real-time" nature of Chatterbox (e.g. does it live up to this description, has it improved your ability to respond/solve the issue?)
8. Would you recommend Chatterbox to others? Why or why not?
9. What might you do to improve Chatterbox?

Appendix E: Prime Data for Chatterbox Analysis

Conversation of Chatterbox Calls to Police Files: May 2014 to November 2015

Date	Total Conversations	Police Files	% Converted to Police Files
2014-May	174	122	70.1%
2014-Jun	241	168	69.7%
2014-Jul	293	186	63.5%
2014-Aug	271	200	73.8%
2014-Sep	249	173	69.5%
2014-Oct	270	199	73.7%
2014-Nov	315	160	50.8%
2014-Dec	231	179	77.5%
2015-Jan	253	183	72.3%
2015-Feb	265	208	78.5%
2015-Mar	281	223	79.4%
2015-Apr	313	221	70.6%
2015-May	295	225	76.3%
2015-Jun	294	253	86.1%
2015-Jul	348	226	64.9%
2015-Aug	287	198	69.0%
2015-Sep	274	205	74.8%
2015-Oct	241	183	75.9%
2015-Nov	182	137	75.3%

Chatterbox Calls by Line by Year and Month: January 2014 to December 2016

Year-Month	Expo	Canada Line	Millennium Line	Other	Grand Total
2014-Jan	17	2	1	5	25
2014-Feb	24	16	2	6	48
2014-Mar	63	22	16	19	120
2014-Apr	66	27	11	35	139
2014-May	55	28	14	25	122
2014-Jun	82	25	21	40	168
2014-Jul	89	22	24	51	186
2014-Aug	102	26	29	43	200
2014-Sep	88	21	21	43	173
2014-Oct	106	24	21	48	199
2014-Nov	83	16	18	43	160
2014-Dec	109	23	13	34	179
2015-Jan	102	23	24	34	183
2015-Feb	120	17	23	48	208
2015-Mar	120	21	23	59	223
2015-Apr	130	16	25	50	221
2015-May	120	31	29	45	225
2015-Jun	147	18	28	60	253
2015-Jul	124	22	34	46	226
2015-Aug	119	13	21	45	198
2015-Sep	119	28	24	34	205
2015-Oct	92	24	22	45	183
2015-Nov	79	10	16	32	137
2015-Dec	116	20	20	47	203
2016-Jan	105	28	17	35	185
2016-Feb	105	20	15	52	192
2016-Mar	119	19	27	54	219
2016-Apr	91	21	17	46	175
2016-May	113	21	19	47	200
2016-Jun	103	21	15	51	190
2016-Jul	102	14	23	41	180
2016-Aug	123	29	24	45	221
2016-Sep	81	29	14	32	156
2016-Oct	80	35	22	41	178
2016-Nov	96	19	18	28	161
2016-Dec	91	24	31	36	182
Total	3481	775	722	1445	6423

Chatterbox Generated Police File Type by Line

File Type	Expo Line	Canada Line	Millennium Line	Other	Grand Total
DISTURBANCE	653	119	128	327	1227
SIPP / DIPP	479	86	76	157	798
CHECK WELLBEING	385	87	98	105	675
LIQUOR ACT	244	47	44	110	445
PANHANDLER	290	105	28	6	429
SUSPICIOUS PERSON	223	53	44	58	378
SUSPICIOUS CIRCUMSTANCES	184	46	49	91	370
TRANSIT	124	36	25	61	246
ASSIST PUBLIC	108	27	27	64	226
DRUGS	100	8	38	61	207
OTHER	86	25	22	58	191
ANNOYING CIRCUMSTANCES	92	29	26	31	178
THREATS	56	8	9	63	136
UNWANTED PERSON	57	23	11	24	115
ASSAULT	47	18	10	36	111
FIGHT	74	9	9	18	110
WEAPON	39	4	7	19	69
HARASSMENT	36	2	1	23	62
MISCHIEF	26	4	8	24	62
INDECENT ACT	33	2	9	17	61
PROPERTY	22	9	8	12	51
ASSAULT SEXUAL	14	4	6	23	47
DOMESTIC	25	3	6	5	39
OTHER	18	2	10	9	39
TRAFFIC	11	2	4	21	38
THEFT	15	8	5	7	35
BYLAW	13	7	5	6	31
MISCHIEF IN PROGRESS	14		7	4	25
ASSAULT IN PROGRESS	13	2	2	5	22
Total	3481	775	722	1445	6423

**Total Police File Types Versus Total Police Files Generated From Chatterbox
Conversations and Percentages**

File Type	Total	SMS	Percentage
ANNOYING CIRCUMSTANCES	566	178	31.4%
HARASSMENT	201	62	30.8%
LIQUOR ACT/LICENSED PREMISES CHECK	1496	445	29.7%
DISTURBANCE	4178	1227	29.4%
BYLAW	114	31	27.2%
PARKING COMPLAINT	50	10	20.0%
CHECK WELLBEING	3633	675	18.6%
SIPP / DIPP	4383	798	18.2%
SUSPICIOUS CIRCUMSTANCES	2211	370	16.7%
ANIMAL	104	17	16.3%
SUSPICIOUS PERSON	2445	378	15.5%
INDECENT ACT	398	61	15.3%
THREATS	888	136	15.3%
SUDDEN DEATH	7	1	14.3%
TRANSIT INCIDENT	1788	246	13.8%
HAZARDOUS SITUATION	97	13	13.4%
ABANDONED VEHICLE	15	2	13.3%
PANHANDLER	3471	429	12.4%
FIGHT	948	110	11.6%
ASSAULT SEXUAL	423	47	11.1%
MISCHIEF IN PROGRESS	240	25	10.4%
IMPAIRED	50	5	10.0%
DRUGS	2308	207	9.0%
UNWANTED PERSON	1325	115	8.7%
SCREAMS	47	4	8.5%
ASSIST GENERAL PUBLIC	2924	226	7.7%
BREACH THE PEACE	13	1	7.7%
DOMESTIC REPORT	79	6	7.6%
ASSAULT REPORT	1668	111	6.7%
TRAFFIC INCIDENT	617	38	6.2%
DOMESTIC IN PROGRESS	655	39	6.0%
BOMB THREAT	34	2	5.9%
PREMISE INSECURE	17	1	5.9%
MAN DOWN	111	6	5.4%
OTHER CRIMINAL CODE	797	39	4.9%
WEAPON	1640	69	4.2%
MISCHIEF	1483	62	4.2%
SUSPICIOUS VEHICLE	100	4	4.0%
ASSIST MENTAL HEALTH ACT	152	5	3.3%
ASSAULT IN PROGRESS	682	22	3.2%

SHOTS FIRED	101	3	3.0%
MVI HIT AND RUN	90	2	2.2%
THEFT	1622	35	2.2%
PROPERTY	2490	51	2.0%
FRAUD	736	15	2.0%
THEFT IN PROGRESS	1027	16	1.6%
DEMONSTRATION / PROTEST	66	1	1.5%
FOUND PERSON	220	3	1.4%
SUICIDAL PERSON	1091	13	1.2%
SHOPLIFTER	168	2	1.2%
BREACH	1095	13	1.2%
ROBBERY	397	4	1.0%
WARRANT	1475	13	0.9%
ASSIST OTHER AGENCY	1228	8	0.7%
MVI	394	2	0.5%
ASSIST POLICE / FIRE / AMBULANCE	2217	10	0.5%
ROBBERY IN PROGRESS	512	2	0.4%
SPECIAL ATTENTION / DETAIL / EVENT	589	2	0.3%
MISSING CHILD	341	1	0.3%
INTELLIGENCE INFORMATION	752	1	0.1%
MISSING PERSON	2916	3	0.1%
Total	61885	6423	100%

References

- Abbotsford Police Department. (2013). *Non emergency texting* [PowerPoint Presentation]. Received from W. Plamondon via email communication.
- Baumer, E.P. & Lauritsen, J.L. (2010). Reporting crime to the police, 1973-2005: A multivariate analysis of long-term trends in the national crime survey (NCS) and national crime victimization survey (NCVS). *American Society of Criminology*, 48(1), 131-185. DOI: 10.1111/j.1745-9125.2010.00182.x
- Block, R. & Davis, S. (1996). "The environs of rapid transit stations: A focus for street crime or just another risky place?" In R.V. Clarke (ed.), *Preventing Mass Transit Crime. Crime Prevention Studies*, Vol. 6, pp. 237-257. Monsey, N.Y.: Criminal Justice Press. Retrieved from http://www.popcenter.org/problems/street_robbery/PDFs/BlockDavis1996.pdf
- B.C. Stats. (2016). *British Columbia-Level Population Projections (July 2016)*. Retrieved from <http://www.bcstats.gov.bc.ca/StatisticsBySubject/Demography/PopulationProjections.aspx>
- Boyce, J. (2015). Police-reported crime statistics in Canada, 2014. *Statistical Canada*. [Catalogue number 85-002-X]. Retrieved from <http://www.statcan.gc.ca/pub/85-002-x/2015001/article/14211-eng.htm>
- British Transport Police. (2015). *2015 Public Consultation Survey*. Retrieved from <https://www.btp.police.uk/PDF/Public%20Consultation%202015v4.pdf>
- Brunoro, M. (2014). Spike in sexual harassment on transit prompts warning. *CTV BC*. Retrieved from <http://bc.ctvnews.ca/spike-in-sexual-harassment-on-transit-prompts-warning-1.1637597>
- Bryman, A., Bell, E., & Teevan, T. (2012). *Social Research Methods*, 3rd. Canadian Ed. Oxford University Press, Don Mills, Ontario.
- Cohen, L.E. & Felson, M. (1979). Social change and crime rate trends: A routine activity approach. *American Sociological Review*, 44(1), 588-608. Retrieved from http://cj-resources.com/CJ_Crim_Theory_pdfs/social%20change%20and%20crime%20rate%20trends%20a%20routine%20activity%20approach%20-%20Cohen%20et%20al%201979.pdf
- Costello, S. (2017). *Everything you need to know about SMS & MMS*. Retrieved from <https://www.lifewire.com/what-is-sms-mms-iphone-2000247>

- Darley, J.M. & Latane, B. (1968). Bystander intervention in emergencies: Diffusion of responsibility. *Journal of Personality and Social Psychology*, 8, 377–383. Retrieved from http://www.wadsworth.com/psychology_d/templates/student_resources/0155060678_rathus/ps/ps19.html
- E-Comm. (2017). *How 9-1-1 works*. Retrieved from <https://www.ecomm911.ca/contacting-911/how-911-works.php>
- E-Comm. (2017). *Text with 9-1-1*. Retrieved from <https://ecomm911.ca/contacting-911/T911system.php#textwith911>
- E-Comm. (n.d.). *Text with 9-1-1: For the deaf, deaf-blind, hard-of-hearing and speech impaired* [PowerPoint Presentation]. Retrieved from https://ecomm911.ca/contacting-911/documents/T911Presentation-revised_27May15.pdf
- FluidSurvey. (2016). *Pricing*. Retrieved from <http://fluidsurveys.com/pricing/>
- Gallison, J.K. (2012). The Skytrain as an exporter of crime? Exploring the spatial distribution of crime on the Canada Line. *Simon Fraser University*. Retrieved from <http://summit.sfu.ca/item/12286>
- Gallison, J.K. & Andresen, M.A. (2017). Crime and public transportation: A case study of Ottawa's O-Train system. *Canadian Journal of Criminology and Criminal Justice*, 59(1), 94-122. DOI: 10.3138/cjccj.2016.E35
- Gansberg, M. (1964, March 27). 37 who saw murder didn't call the police. *The New York Times*. Retrieved from <http://www.nytimes.com/1964/03/27/37-who-saw-murder-didnt-call-the-police.html>
- Gayomali, C. (2012). The text message turns 20: A brief history of SMS. *The Week*. Retrieved from <http://theweek.com/articles/469869/text-message-turns-20-brief-history-sms>
- Government of British Columbia. (n.d.) *Income assistance payment dates*. Retrieved from <http://www2.gov.bc.ca/gov/content/family-social-supports/income-assistance/payment-dates>
- Hard, J. (2015). How SMS works. *Howstuffworks*. Retrieved from <http://computer.howstuffworks.com/e-mail-messaging/sms1.htm>
- Hui, S. (2013). Harassment on TransLink project seeks safer transit for women. *The Georgia Straight*. Retrieved from <http://www.straight.com/news/516381/harassment-translink-project-seeks-safer-transit-women>

- Latane, B. & Darley, J.M. (1968). Group inhibition of bystander intervention in emergencies. *Journal of Personality and Social Psychology*, 10(3), 215-221. Retrieved from http://www.morilab.net/gakushuin/Latane_&_Darley_1968.pdf
- Levine, N. & Wachs, M. (1986). Bus crime in Los Angeles: I – Measuring the incidence. *Transportation Research Part A: General*, 20(4), 273-284. doi:10.1016/0191-2607(86)90086-5
- Matharu, J., Hale, B., Ammar, M., & Brennan, P.A. (2016). Short message service (SMS) texting as a method of communication during on call: prevalence and experience of medical staff in a large acute NHS Trust in the UK. *British Journal of Oral and Maxillofacial Surgery*, 54(8), 863-867. doi: 10.1016/j.bjoms.2016.05.034
- Metropolitan Police Department. (n.d.). *Text the police: 50411*. Retrieved from <https://mpdc.dc.gov/service/text-police-50411>
- Microsoft. (2016). *Find a lost phone*. Retrieved from <https://support.microsoft.com/en-us/help/11585/windows-phone-find-a-lost-phone>
- National Emergency Number Association. (2016). *NENA Master Glossary of 9-1-1 Terminology*. Retrieved from https://c.ymcdn.com/sites/www.nena.org/resource/resmgr/standards/NENA-ADM-000.19-2016_FINAL_2.pdf
- Nauert, R. (2015). Seeing Violence on Social Media Can Lead to PTSD-Like Symptoms. *Psych Central*. Retrieved from <https://psychcentral.com/news/2015/05/07/observing-violence-on-social-media-can-lead-to-ptsd/84361.html>
- Pedwell, T. (2017). Next-generation 911: CRTC braces for emergency video and texting. *The Canadian Press*. Retrieved from <http://www.theglobeandmail.com/news/national/next-generation-911-crtc-braces-for-emergency-video-and-texting/article33631341/>
- Perreault, S. (2015). Criminal victimization in Canada, 2014. *Statistical Canada*. [Catalogue number 85-002-X]. Retrieved from <http://www.statcan.gc.ca/pub/85-002-x/2015001/article/14241-eng.htm>
- Phillips, D.C. & Sandler, D. (2015). Does public transit spread crime? Evidence from temporary rail station closures. *Regional Science and Urban Economics*, 52(1), 13-26. Retrieved from <http://dx.doi.org/10.1016/j.regsciurbeco.2015.02.001>
- Qin, X., & Liu, L. (2016). Evaluating the relationships of bus transit with street and off-street robberies. *Professional Geographer*, 68(2), 227-237. doi: 10.1080/00330124.2015.1059400

- Rogers Arena. (2017). *Fan texting service*. Retrieved from <https://rogersarena.com/fan-services/fan-texting-service/>
- Slattery, J. (2017). April's "Welfare Wednesday" single worse day for recorded overdose calls in B.C. history. *Global News*. Retrieved from <http://globalnews.ca/news/3411045/aprils-welfare-wednesday-single-worst-day-for-recorded-overdoses-calls-in-b-c-history/>
- TransLink. (2013). *2011 metro Vancouver regional trip diary survey: Analysis report*. Retrieved from http://www.translink.ca/-/media/Documents/customer_info/translink_listens/customer_surveys/trip_diaries/2011%20Metro%20Vancouver%20Regional%20Trip%20Diary%20%20Analysis%20Report.pdf
- TransLink. (2016). *Bikes on SkyTrain*. Retrieved from <http://www.translink.ca/en/Rider-Guide/Bikes-on-Transit/Bikes-on-SkyTrain.aspx>
- Transit Police. (2016). *About us*. Retrieved from <https://transitpolice.ca/about-us/>
- Transit Police. (2016). *History*. Retrieved from <https://transitpolice.ca/about-us/history/>
- Transit Police. (2017). *Jurisdiction, mandate & authority*. Retrieved from <https://transitpolice.ca/about-us/jurisdiction-mandate-and-authority/>
- U.S. Short Code Directory. (2017). *What is an SMS aggregator?*. Retrieved from <https://usshortcodedirectory.com/faq/what-is-an-sms-aggregator/>
- Vancouver Police Department. (2011). *Update – Integrated Riot Investigation*. Retrieved from <http://mediareleases.vpd.ca/2011/07/20/update-integrated-riot-investigation-2/>
- Yabe, M. (2016). Students, Faculty, and Staff's Willingness to Pay for Emergency Texting. *Journal Of Applied Security Research*, 11(4), 437-449. doi:10.1080/19361610.2016.1210486
- Young, P., Moore, E., Griffiths, G., Raine, R., Stewart, R., Cownie, M., & Frutos-Perez, M. Help is just a text away: The use of short message service texting to provide an additional means of support for health care students during practice placements. *Nurse Education Today*, 30(2), 118-223. doi: 10.1016/j.nedt.2009.06.010
- Yu, S. V. (2011). *Do bus stops increase crime opportunities? [electronic resource]*. El Paso, Tex.: LFB Scholarly Publishing LLC. Retrieved from <http://ebookcentral.proquest.com/lib/ufvca/detail.action?docID=1057881>