

# Toronto Healthcare Services and Barriers to Access for Street-Involved Youth: Analysis of the Enhanced Street Youth Surveillance (E-SYS)

Leanne Morris<sup>1,2</sup>, Kimmy CK Fung<sup>3</sup>, Rosane Nisenbaum<sup>4,5</sup>, Madeleine Weekes<sup>3</sup> and Tony Barozzino<sup>3,6\*</sup>

<sup>1</sup>Department of Pediatric Medicine, The Hospital for Sick Children, Canada

<sup>2</sup>Michael Garron Hospital, Canada

<sup>3</sup>Department of Pediatrics, St. Michael's Hospital, Canada

<sup>4</sup>Li Ka Shing Knowledge Institute, Canada

<sup>5</sup>Department of Biostatistics, University of Toronto, Canada

<sup>6</sup>Department of Pediatrics, University of Toronto, Canada

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### \*Corresponding author

Tony Barozzino, Department of Pediatrics, University of Toronto, Canada, Tel: +1 (416) 864-6060x656; Fax: +1 (416) 864-6073; Email: barozzinot@smh.ca

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**Keywords** Homelessness; Homeless youth; Health services accessibility; Urban health; Health status

**Abbreviations** E-SYS: Enhanced Street Youth Surveillance; SIY: Street-Involved Youth; STI: Sexually Transmitted Infection; PHAC: Public Health Agency of Canada

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## Abstract

**Purpose:** Homeless and Street-Involved Youth (SIY) often face substantial physical and emotional challenges and barriers accessing healthcare services. The objectives of the study are to: 1) obtain demographic information for Canadian SIY living in Toronto, Ontario; 2) evaluate self-perceptions of physical and mental health and 3) determine healthcare services used barriers to healthcare access and their association with self-reported health status.

**Methods:** Enhanced Street Youth Surveillance (E-SYS) is a repeated cross-sectional study of SIY, ages 15-24 years, across major urban centers in Canada. E-SYS conducts a nurse-administered survey and collects biological samples. We looked at descriptive statistics and chi-square tests to test for bivariate associations from E-SYS Cycle 6 (2010).

**Results:** A total of 195 SIY, with a mean age of 21.1 years (SD=2.4), were surveyed from Toronto and 60.8% were males. Commonly reported healthcare access points were youth drop-in centers, family doctors, street nurses, or hospital/emergency rooms. More than half (52.3%) reported barriers to accessing healthcare. SIY who reported fair or poor physical ( $p<0.01$ ) and mental ( $p<0.03$ ) health reported significantly more barriers than those reporting good to excellent physical and mental health, respectively. There were no differences in healthcare access barriers by gender, ethnicity, education or history of abuse.

**Conclusion:** Toronto SIY represent a vulnerable population, particularly given their low use of primary health care. Obtaining timely and appropriate health care services may be crucial to SIY well-being and outcomes. Further research is needed to identify the best approaches to improve access to healthcare for SIY in Canada.

## Introduction

Homeless and Street-Involved Youth (SIY) often face substantial physical and emotional challenges yet experience barriers accessing healthcare services. Compared to the general youth population, SIY are much more vulnerable and report increased exposure to physical, sexual and emotional abuse [1-3]. Obtaining timely and appropriate health care services may be crucial to SIY well-being.

For Canadian SIY, substance use/abuse, risky sexual behaviors and chronic medical conditions are more frequently reported compared to the general population. Reports suggest SIY are approximately six times more likely to be daily smokers and over 20 times more likely to have injected drugs at least once in their lifetimes [4,5]. Rates of death due to drug overdose, suicide and attempted suicide are also higher compared to the general population [6-10]. A large cohort study of Montreal SIY found the overall mortality rate of this vulnerable group was eleven times higher than general youth [11,12]. Compared to general youth, SIY are also more likely to report engaging in sexual intercourse at young ages and also have significantly higher prevalence and incidence of Sexually Transmitted Infections (STIs) and blood-borne infections [1,13-15]. Without treatment, STIs can lead to chronic pelvic infections, scarring, infertility, surgical emergencies, and early death. Chronic medical conditions, such as poorly-controlled asthma, tuberculosis, skin infections, and poor oral/dental health are also more common in SIY [10,16]. Given the increased health concerns SIY face, it is essential to understand whether these youth are receiving proper healthcare treatments.

Healthcare access is critical in the prevention and treatment of diseases that are reportedly more prevalent in SIY. Yet, despite the overwhelming burden of health concerns experienced, SIY

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have significantly less access to health care services compared to the general youth population [15,17]. Studies conducted in the United States report barriers to health care access, as identified by SIY, include: uncertainties regarding where to go to obtain youth-friendly services; a lack of gender-specific programming; racism; perceived negative judgmental attitudes held by practitioners; a lack of health care or financial resources; distrust of adults and professional agencies; a lack of familiarity with services; and self-denial of need for care [18,19]. Studies also suggest youth who engage in high-risk behavior have decreased connection to health services [17] and those who are unable to access health and harm services are more likely to report high-risk behavior [20]. Increased rates of high-risk behavior have been related to poor physical and emotional health [21,22] thus leading to the need for increased health care services. Unfortunately, poor health compounded by barriers to healthcare becomes an inherently cyclical problem.

Studies in the United States reported street-based STI testing and mobile outreach programs are effective at reaching youth who face multiple barriers to accessing compared to traditional clinic or service environments [23,24]. In addition, peer-based harm reduction programs which distribute sterile injecting equipment and safer sex supplies have shown higher levels of acceptability among young street-based injection drug users compared to traditional needle exchange programs, which were perceived to be less youth-friendly [25]. Effective results with novel approaches within high-risk populations in the United States suggest the need for increased understanding of the demographics, perceived barriers and specific needs of SIY in Canada. In Toronto (Ontario, Canada) programs from many institutes are available to provide support and health care to SIY. However, no studies have surveyed SIY regarding their experiences accessing the healthcare system.

The objectives of the current study are to: 1) obtain demographic information for Canadian SIY living in Toronto, Ontario; 2) evaluate their self-perceptions of physical and mental health and 3) determine healthcare services used and barriers to healthcare access, as identified by this cohort of Canadian SIY. Findings could inform the selection of evidence-based approaches to improve access to healthcare for SIY in Canada.

## Methods

Data was extracted from the Enhanced Surveillance of Canadian Street Youth (E-SYS) database and analyzed using SAS v9.3. E-SYS is a sentinel surveillance system initiated in 1998 by the Public Health Agency of Canada (PHAC) [4]. The program monitors rates of STIs, risk behaviors and health determinants in the Canadian street youth population. This study was reviewed and approved by the institutional Ethics Review Board at the University of Toronto, Toronto, Ontario.

The first cycle of E-SYS piloted across Vancouver, Halifax and Ottawa and most major Canadian city, including Toronto, participated in subsequent data collection cycles. SIY in each city were recruited from drop-in centers, outreach work and mobile vans. Inclusion criteria for E-SYS included: youth between ages 15-24 years, had spent at least three consecutive nights away from their place of residence in the last 6 months, spoke English or French, and were not intoxicated. Standardized, interviewer-administered questionnaires took approximately one hour to complete and collected information

about youth demographics, living situation, drug and alcohol use, and sexual activities [12]. Upon providing consent to participate in the study, participants were also encouraged to provide laboratory samples of urine and blood to test for STIs. This study extrapolated data from the Toronto youth population, for a total of 1510 participants from 1999-2009 (E-SYS cycle #2-6). Some respondents may have participated in more than one cycle but each participant was unique within each cycle. Data from the questionnaire were analyzed in SAS v9.3 using descriptive statistics and chi-square tests to investigate bivariate relationships. Chi-square tests were used to compare proportions for categorical variables and two-sample t-tests were used to compare means for continuous variables.

## Results

A total of 195 SIY with a mean age of 21.1 years (SD=2.4) were surveyed from Toronto, including 118 (60.5%) males, 76 (39%) females and 1 (0.5%) transgender (Table 1). The participants were from diverse ethnic backgrounds, including Caucasian (49.7%), Black (20.5%), Aboriginal (14.9%), or 'Other' (14.9%).

**Table 1:** Baseline demographics of surveyed street-involved youth.

Variables	N (%)	Barriers (%)	p-value
<b>All</b>	195 (100.0)	102 (52.3)	
<b>Age</b> (Mean, SD)	21.1 (2.4) years		
<b>Gender</b>			0.564
Male	118 (60.5)	64 (54.2)	
Females	76 (39.0)	38 (50.0)	
Transgendered	1 (0.5)		
<b>Ethnicity*</b>			0.383
Aboriginal	29 (14.9)	16 (55.2)	
Black	40 (20.5)	16 (40.0)	
Caucasian only	97 (49.7)	54 (55.7)	
Other	29 (14.9)	16 (55.2)	
<b>Education</b>			0.656
Completed high school	85 (43.6)	56 (50.9)	
Did not complete high school	110 (56.4)	46 (54.1)	
<b>Main sources of income</b>			0.137
Government	116 (61.7)	55 (47.4)	
Work	34 (18.1)	17 (50.0)	
Family or friends	16 (8.5)	10 (62.5)	
Illicit activities	22 (11.7)	16 (72.7)	
<b>Sexuality</b>			0.675
Sexual minority	58 (29.7)	29 (50.0)	
Heterosexual only	137 (70.3)	73 (53.3)	
<b>Mental Health</b>			0.026
Fair/Poor	59 (30.3)	38 (64.4)	
Excellent/Very good	136 (69.7)	64 (47.1)	
<b>Physical Health</b>			0.005*
Fair/Poor	47 (24.1)	33 (70.2)	
Excellent/Very good	148 (75.9)	69 (46.6)	
<b>Abuse history</b>			0.064
Yes	51 (26.2)	21 (41.2)	
No	144 (73.9)	81 (56.3)	

\*Note that these groups represent Aboriginal, Black if not Aboriginal, Other if not Black or Aboriginal, Caucasian if not Black, Aboriginal or Other.

A high proportion (73.9%) of SIY reported a history of abuse, where gender was a strong determinant. A statistically significantly higher proportion of females reported experiencing a history of abuse compared to males (82.9% vs 68.6%,  $p=0.03$ ). There were no statistically significant differences for history of abuse across ethnicity.

Youth were also surveyed on their healthcare access and whether they experienced any barriers to accessing these resources (Table 2). Almost half of the respondents reported accessing healthcare through youth drop-in centers (48.2%), while others visited their family doctors (17.9%), street nurses (13.3%) or hospital/emergency rooms (11.8%). Approximately half of the SIY (52.3%) reported experiencing barriers to accessing healthcare. Among those who experienced barriers, a few agreed there were limited opportunities to access healthcare due to short opening hours (4.6%), barriers associated with local social norms such as stigma, shame or social discomfort (4.6%), and long wait times (3.6%). However, a large majority of the youth (41.0%) reported ‘other barriers’ suggesting the selections available on the questionnaire did not highlight their concerns. The ‘other barriers’ include lack of health insurance cards (13.9%), financial concerns including health benefits, medication costs and transportation (9.7%) and lack of transportation (5.1%). These individual themes emerged among multiple youth without probes within the survey, suggesting that these barriers are substantial for many SIY and should be addressed. There were no differences in healthcare access barriers by gender, ethnicity, education or history of abuse.

SIY were also interviewed on their self-perceived physical and mental health on a Likert scale (Poor, Fair, Good, Very Good and Excellent) as shown in table 3. A majority of SIY reported good, very good, or excellent physical health (75.9%) and mental health (69.7%).

**Table 2:** Self-reported health care access points and barriers. Multiple answers were accepted.

Health Care Access and Barriers	N (%)
<b>Health Care Access Point</b>	
Youth Drop-in Center	94 (48.2)
Regular/Family Doctor	35 (18.0)
Nurse (street outreach or working in a shelter)	26 (13.3)
Hospital/Emergency Room	23 (11.8)
Walk-in clinic	12 (6.2)
Community Health Organization	4 (2.1)
STI clinic	2 (1.0)
Other	25 (12.8)
<b>Types of Barriers (dropdown options)</b>	
Limited Opportunities for Access (opening hours)	9 (4.6)
Local Social Norms (or stigma, shame, and social discomfort)	9 (4.6)
Long Wait Times	7 (3.6)
Other barrier (free-text)*	80 (41.0)
No health or ID card	25 (32.1)
Financial concerns (health benefits, costs associated with medication, transportation)	26 (33.3)
Lack of transportation stated alone	12 (15.4)

\*Only commonly reported ‘other barriers’ were included.

**Table 3:** Self-reported health status and history of abuse and barriers to health care (n=195).

Health Status	History of Abuse*	Barriers to Health Care*
<b>Physical Health (n, %)</b>		
Fair/poor	42 (89.4)	33 (70.2)
Good/very good/excellent	102 (68.9)	69 (46.6)
	$p=0.0055$	$p=0.026$
<b>Mental Health (n, %)</b>		
Fair/poor	50 (84.8)	38 (64.4)
Good/very good/excellent	94 (69.1)	64 (47.1)
	$p=0.0225$	$p=0.005$

\*Percentage based on those who reported a health status.

Chi-square tests showed statistically significant different associations between health statuses and history of abuse, as well as barriers to healthcare access. SIY with poor or fair physical health (24.1%) reported significantly higher rates of history of abuse (89.4% vs 68.9%,  $p<0.01$ ) and significantly greater barriers to healthcare access (64.4% vs 47.1%,  $p<0.05$ ) compared to SIY with good, very good, or excellent physical health. Similar results were found where those with poor or fair mental health (30.3%) reported significantly higher rates of history of abuse (84.8% vs 69.1%,  $p<0.05$ ) and significantly greater barriers to health care access (70.2% vs 46.4%,  $p<0.01$ ) compared to SIY with good, very good, or excellent mental health. The results suggested self-reported physical and mental health status is strongly associated with history of abuse and barriers to healthcare access.

## Discussion

### History of abuse

Street-involved youth are an extremely vulnerable population subjected to high rates of abuse [1-3]. The results of this study were consistent with the existing literature where a high number of surveyed street youth described experiencing at least one type of abuse in their lifetime (73.9%). In addition, females are more likely than males to have experienced at least one type of abuse (82.9% vs 68.6%,  $p=0.03$ ). The significant difference found in abuse outcomes between SIY genders may suggest a unique need for specific health care targeted towards female street youth. The programs should focus on acknowledging and providing support for the difficult circumstances SIY have may have experienced. Currently, the results suggest history of abuse is non-discriminant among ethnicity as we found no statistically significant differences between ethnic groups. However, follow-up studies using larger sample sizes may be able to detect a statistical difference. If future studies suggest particular ethnic groups are at higher risks for experiencing history of abuse, appropriate programs could target these vulnerable groups as proactive preventive measures or remediation.

### Accessing health care

Approximately half (48.2%) of SIY surveyed accessed healthcare services from a youth drop-in center while others obtained healthcare from a family doctor, nurse, hospital emergency room and/or walk in clinic. The youth drop-in centers were the most popular with SIY perhaps due to the effective nature of a health care facility which also provides services such as meals, art therapy, employment aid and ease

of access to other resources catered towards SIY. These specialized centers may also provide a protective environment for the SIY without the social stigma they may face at a family doctor or a walk in clinic. However, further analysis is required to better understand SIY's preference towards using drop in centers for health care services. Other reported health care access points included nurses involved in street outreach or working in a shelter (13.3%), hospital/emergency rooms (11.8%) and walk-in clinics (6.2%), which may be related to ease of access of these resources, as well as lack of planning required. However, only 1% of the participants reported accessing healthcare from a STI clinic while it is estimated approximately 19.1% of SIY report ever having Chlamydia and 11.6% report ever having gonorrhoea [26]. No SIY reported utilizing mobile health clinics and anonymous HIV clinics. This directly contrast U.S. findings stating the effectiveness of mobile health clinics in delivering health care to street youth [23,24]. The low utilization may be attributed to lack of knowledge about availability of mobile health clinics, convenience of other health services, or bias of the study group given that a drop-in center is one recruitment site for the study. However, a handful of SIY (12.8%) reported utilizing 'other' health care services not listed on the survey, suggesting the survey could be modified for future data collection cycles to reflect options SIY select.

### Barrier to accessing health care

More than half of the SIY (52.3%) experienced barriers to accessing healthcare. Some of these barriers included limited opportunities such as inconvenient opening hours, social reasons such as stigma or shame, and long wait times. However, among those that did suggest barriers, a large majority (41.0%) highlighted 'other' barriers. The high number of participants who selected 'other' suggests the SIY perspective of barriers is vastly different than those perceived by the public health care professionals that are studying such populations. The barriers suggested by the youth include administrative issues such as lack of health insurance cards, financial concerns and lack of transportation. While there are a variety of health care services available to SIY that addresses these issues, perhaps they are not well advertised to the target population. For example, The Rotary Club of Toronto Health Buses aims to reduce barriers by removing the need for appointments, referrals, health cards while making regular stops to local shelters, drop-in centers, community centers and out-of-the-cold locations. However, no participants reported using mobile clinic service as their healthcare access point. Although healthcare services exist to address such barriers, the services may not be adequately advertised and promoted to allow the target population to access healthcare services.

### Self reported physical and mental health

Among the SIY surveyed, the majority rated their physical health as good, very good or excellent (75.9%) and mental health as good, very good, or excellent (69.7%). Given the increased incidences of blood-borne infections [1,13,14] chronic medical conditions [10,16] drug overdose, attempted suicide [6-10] and substance use [4,5] among this population, our results suggest a lack of correlation between SIY's self perception of their health status compared to their actual health status. In 2009, 77% of survey Canadian youth described their mental health as good or excellent [27], a percentage relatively similar to that found in our Toronto SIY population. Similarly, in a Toronto Public Health Survey conducted in 2015 on 6,053 students from Grade 7-12,

92% of the students reported 'good' or 'better' physical health [28]. While the study found similar self reported physical and mental health compared to Canadian and Toronto samples, there is reason to suspect SIY may have a higher self perception of physical and mental health than their actual health status. The dangers of potentially inflated self perceived physical and mental health in SIY may prevent and/or delay accessing appropriate health care.

In Toronto, our study found over half of street youth surveyed reported barriers to accessing health services (52.3%). Self-perceived physical and mental health were both correlated to histories of abuse where those with fair or poor physical health ( $p<0.05$ ), and fair or poor mental health ( $p<0.05$ ) are associated with histories of abuse. Causality cannot be determined for these two variables based on this study. Amongst those with fair or poor physical health ( $p<0.05$ ) and fair or poor mental health ( $p<0.05$ ), there was also a statistically significant difference between reporting experienced barriers to health care. The results suggest this group has higher needs for health care services, yet faces the largest difficulties in accessing them. A Salt Lake City study on SIY found 84% have experienced childhood physical and/or sexual abuse and 44% of victims were interested in seeking treatment regarding their abuse history [29]. Our results have unveiled SIY with histories of abuse are more likely to report lower self-perceived physical and mental health, while experiencing higher barriers to accessing healthcare. Therefore, current programs catering to SIY should direct more resources to help individuals with a history of abuse, as they are much more likely to benefit from healthcare services.

### Conclusion

SIY are an extremely vulnerable group evident through the higher rates of exposure to abuse and often lower physical and mental health compared to the general youth population. The elevated self-perceived physical and mental health of SIY suggests this population may delay or avoid seeking health care in a timely manner. However, when SIY accesses health care services, the lack of health cards, financial concerns and difficulty obtaining transportation were barriers that emerged in the qualitative portion of the survey. Additionally, SIY with lower self-reported mental health and physical health are associated with histories of abuse, and also experience barriers to accessing health care. Therefore, there is an urgent need to evaluate possible solutions to address these specific barriers to better aid youth in accessing health care. In addition, the gaps between expert opinion and youth feedback indicate the need for further forums to better understand this vulnerable group's unique health care needs. This study demonstrated a high proportion of Toronto SIY reporting barriers to health care access, irrespective of gender, ethnicity, education and history of abuse.

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