The Impact of Opioids and Other Drugs in Hastings and Prince Edward Counties

A Situational Assessment

2019

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ACRONYMS	
ACEs	Adverse Childhood Experiences
ADL	Activities of Daily Living
BQWCHC	Belleville and Quinte West Community Health Centre
CAS	Children's Aid Society
CCHS	Canadian Community Health Survey
CHC	Community Health Centre
CME	Continuing Medical Education
ED	Emergency Department
EMS	Emergency Medical Services
HBM	Health Belief Model
HIV	Human Immunodeficiency Virus
HPEC	Hastings and Prince Edward Counties
HPEPH	Hastings Prince Edward Public Health
MME	Morphine Milligram Equivalents
MOHLTC	Ministry of Health and Long-Term Care
NEP	Needle Exchange Program
OAT	Opioid Agonist Therapy
OATC	Ontario Addiction Treatment Centre
ODSP	Ontario Disability Support Program
PHIPA	Personal Health Information and Protection Act
RAAM	Rapid Access Addiction Medicine
RR	Rate Ratio
SDOH	Social Determinants of Health
STI	Sexually Transmitted Infection

DEFINITIONS

Adverse childhood experiences	Stressful or traumatic experiences that happen in an individual's life before the age of 18. These experiences can have negative, lasting effects on health and well-being, including mental illness and problematic substance use. Adverse childhood experiences may include abuse (e.g., physical, emotional, sexual), neglect (e.g., physical, emotional), or household dysfunction (e.g., mental illness, relative in jail, mother treated violently, problematic substance use, divorce) (1).
Advocacy	A process of influencing outcomes that consists of organized actions to address an issue. Advocacy may include gaining political commitment to address the issue (2).
Barriers	Factors that restrict the use of a service by making it more difficult for individuals to access, use, or benefit from what it offers. Barriers are identified based on who is suggested or who is best able to address the barrier – a system, organization, service provider, or individual.
Bureaucracy	At the system-level, bureaucracy refers to hierarchical and administrative structures of systems such as governments or sectors of health care that complicate and create additional barriers to accessing services. At the organizational-level, bureaucracy refers to organizational policies and procedures that are rigid and thereby limit the ability of organizations to be flexible to effectively meet clients' needs.
Client-centred care	An approach in which clients are viewed as whole; it is not merely about delivering services where the client is located. Client-centred care involves advocacy, empowerment, and respecting the client's autonomy, voice, self-determination, and participation in decision-making (3).
Community hub	A physical space (e.g., medical office, community centre) that offers co-located or integrated services such as education, health care, and social services (4).
Criminalization	The act of making the personal use, possession, production, and sale of certain drugs illegal (5).
Dependence	A physical condition in which the body has adapted to the presence of a drug due to repeated administration. Withdrawal symptoms occur when drug use stops (6).
Diversion	Unlawful channeling of regulated pharmaceuticals from legal sources (e.g., the physician, pharmacy) to the illicit marketplace.
Drop-in model	A service delivery model in which clients can access services without an appointment. This model reduces barriers to accessing services that are related to long wait times and attending pre-scheduled appointments.

DEFINITIONS

Good Samaritan Law	The Good Samaritan Drug Overdose Act provides an exemption from charges of simple possession of a controlled substance as well as from charges concerning a pre-trial release, probation order, conditional sentence, or parole violations related to simple possession, for people who call 911 for themselves or another individual suffering an overdose, as well as anyone who is at the scene when emergency help arrives (7).
Guiding principle	Broad philosophies or a set of values that have been suggested to encompass or guide system, organizational, and service provider-level approaches to addressing needs of individuals who use opioids and other substances. These principles can provide a framework for decision-making for all related stakeholders, rather than targeting a specific stakeholder.
Harm reduction	Policies, programs and practices that aim primarily to reduce the adverse health, social, and economic consequences of the use of legal and illegal drugs without necessarily reducing drug consumption (8).
Holistic approach to care	An approach to care that involves consideration for the whole person, not just physical symptoms. Holistic care recognizes the interdependence of biological, social, psychological, and spiritual factors in health and well-being, including the role of the social determinants of health (9).
Integration of services	Coordination of health, social, and other services to meet the needs of a client and to reduce barriers to accessing and navigating care. Integration brings together services (e.g., mental health, substance use) under one organization, system network, or other arrangement. Integration at the system level involves coordination of services across multiple organizations.
Lived experience	Past or present experience of problematic substance use that influences an individual's perception of knowledge. Research and program planning may be informed by a representation and understanding of specific lived experience (10).
Methadone	A long-acting synthetic opioid agonist that is prescribed as a treatment for opioid dependence (11).
Naloxone	A medication, called an opioid antagonist, used to counter the effects of opioid overdose. Naloxone is sold under the brand name Narcan, among others (12).
Opioid agonist therapy	A drug therapy that involves taking long-acting opioid agonists (i.e., methadone, suboxone) to replace shorter-acting opioids (e.g., heroin, oxycodone, fentanyl). Long-acting means that the drug acts more slowly in the body over a longer period, preventing withdrawal for 24-36 hours without causing a high. This therapy can also eliminate or reduce cravings for opioid drugs (11).
Opioids	A broad group of natural and synthetic substances that activate special opioid receptors in the brain, releasing signals that depress the central nervous system (CNS) (13). Opioids can be prescribed medications but can also be produced or obtained illegally (13).

DEFINITIONS

Outreach	A way of delivering services outside of the traditional office setting, and a way of making contact with people who are not connected with formal services. The concept of outreach demonstrates an organization's willingness to go to the community rather than wait for the community to come to the organization (13).
Peer support	A form of support based on the belief that people who have faced, endured, and overcome adversity can offer useful support, encouragement, hope, and perhaps mentorship to others facing similar situations (14). Peer support varies in formality, ranging from informal relationships between individuals with shared experiences, to paid positions within organizations where peer support workers receive specialized training to fulfill a designated role (15).
Problematic substance use	A pattern and type of substance use (e.g., defined under 'potentially harmful' and 'substance use disorder' in the substance use spectrum cited in the Ontario Public Health Standards), which has a higher risk of adverse individual and societal health impacts (16).
Referral	A service provider's actions to connect a client to another service or program.
Safe space	An environment or place created for people who use drugs (or other marginalized populations) to feel free from judgment or harm. Safe spaces provide opportunities for socializing, recreation, and social support.
Safe consumption site	Facilities that provide sterile drug use equipment for people to use pre-obtained drugs in a safe and clean space, supervised by trained staff who can respond to overdoses (17). Safe consumption sites often also provide other health and social services to address substance-related harms and can connect clients to other organizations in the community.
Service delivery model	A framework or set of principles that defines how specific types of services operate.
Social determinants of health	The interrelated social, political, and economic factors that create the conditions in which people live, learn, work, and play. The intersection of the social determinants of health causes these conditions to shift and change over time and across the life span, impacting the health of individuals, groups, and communities in different ways (18).
Social exclusion	Experiences and relationships that constrain participation in society and enable unjust social relations. Social exclusion includes exclusion from civil society, exclusion from access to social goods, exclusion from social production, and economic exclusion (19).
Solution	Actions that can be taken at the system, organizational, service provider, and/or individual level to increase access and reduce barriers to services that address problematic substance use. Facilitators can also be classified as solutions.
Stigma	Negative attitudes (prejudice) and negative behaviours (discrimination) toward people who use drugs (20).

DEFINITIONS

Suboxone	Suboxone is the brand name combination medication that includes buprenorphine and naloxone that is used to treat opioid dependence. Buprenorphine is an opioid agonist-antagonist that helps prevent withdrawal symptoms caused by stopping other opioids. Naloxone is a narcotic antagonist that blocks the receptors for opioids and causes severe withdrawal when injected. These qualities prevent misuse of this medication (11).
Substance misuse	The use of a substance for a purpose not consistent with legal or medical guidelines (21).
Substance use disorder	Substance use that has become a physical and/or mental addiction characterized by frequent and compulsive use despite negative health and social effects. Substance use disorders are medical conditions that often require treatment from health care providers. They can involve both psychological and physical dependence (16).
System-level	A group of organizations that have similar mandates or similar activities. Systems are often interconnected (e.g., primary care and harm reduction programs). Systems can also exist outside of organizational boundaries and influence the behaviour of multiple other systems (e.g., governing bodies, social structures, and institutions).
System navigation	An individual's ability to identify and access services to adequately address his or her needs.
Trauma-informed care	Services that use an understanding of trauma in all aspects of service delivery and place priority on trauma survivors' safety, choice, and control. They create a treatment culture of nonviolence, learning, and collaboration. The goal of trauma-informed care is to avoid re-traumatizing individuals (22).
Victimization	When an individual who uses drugs becomes a victim of a crime (e.g., experiences theft or violence).

EXECUTIVE SUMMARY

Problematic opioid use continues to be a public health concern in Ontario and beyond. As part of provincial efforts to address this problem, the Ministry of Health has tasked Public Health Units with the development of a local opioid response that maintains and expands opioid-related programming based on local data and community need. To fulfill this requirement, Hastings Prince Edward Public Health (HPEPH) conducted a situational assessment to better understand local lived experience of problematic opioid and other drug use, as well as learn more about the perspectives of local service providers engaging these populations. This project aimed to increase understanding of local trends in opioid and other drug use, identify barriers and facilitators to accessing services that reduce drug-related harms, and to contribute to comprehensive solutions to address problematic use of opioids and other drugs in Hastings and Prince Edward Counties (HPEC). Collectively, the information gathered is intended to inform program planning and service distribution among HPEPH and other health, harm reduction, and social services.

HPEPH staff have consolidated the available data on local population health to demonstrate the impact of the opioid crisis in HPEC. Continued surveillance of the population allows stakeholders to respond to emerging and ongoing trends related to opioid prescription, use, and harms. Aside from the use of MDMA (ecstasy), lifetime drug use is higher in HPEC than in Ontario. Opioid-related emergency department visits, hospitalizations, and deaths have also been consistently higher in HPEC than in Ontario. In response to this ongoing crisis, the prescription of opioids for pain and prescription of opioids in high daily doses have decreased, and Opioid Agonist Therapy (OAT), naloxone distribution, and distribution of harm reduction supplies have expanded. The growing market of non-prescription opioid use likely plays a substantial role in the persistence of opioid-related harms in HPEC, as well as in Ontario.

Qualitative research was undertaken to investigate the abovementioned issues. This included key informant interviews which were conducted with HPEC service providers who provide services to people who use opioids and other drugs. In addition, focus groups were conducted with individuals with lived experience of problematic opioid and/or other drug use in Madoc, Picton, Bancroft, Trenton, and Belleville. Data from the key informant interviews and focus groups was organized using thematic analysis.

Focus group participants and key informants discussed factors contributing to problematic substance use, as well as the uptake of harm reduction practices. Thematic analysis of this data identified that barriers and solutions affecting access to services for problematic substance use exist at individual, service provider, organizational, and system levels (Table 1). Similarly, after identifying the underlying philosophies of the suggested approaches used to address the needs of people who use drugs, guiding principles for solutions emerged.

Table 1. Barriers, solutions, and guiding principles affecting access to services for problematic substance use identified through thematic analysis

Level	Barriers	Solutions	Guiding Principles
System	• Bureaucracy • Stigma • Criminalization • Lack of services • System navigation • Rurality • Lack of transportation	• Anti-stigma education • Government advocacy • Increase access to OAT	• Client-centred care • Involve people with lived experience • Trauma-informed care
Organizational	• Bureaucracy • Lack of access to harm reduction services • Stigma when accessing services • Awareness of HPEPH harm reduction services • Lack of integration of mental health with OAT	• Raise public awareness of services • Increase access to harm reduction supplies • Stigma reduction	• Flexible programming • Integration of services • Holistic model of care • Multi-sectoral collaboration • Stigma reduction
Service Provider	• Lack of knowledge and lived experience • Stigma • Negative therapeutic relationship	• Professional development	• Referral • Judgment-free care • Trauma-informed care
Individual	• Readiness • Perceived benefits • Self-efficacy • Perceived susceptibility • Perceived severity		

The hierarchal structure and interactions between these levels were represented and interpreted through a social ecological model. Social ecological models situate individuals within larger social systems and describe how health outcomes are created by the interaction of individuals and their environments. The concentration of solutions and guiding principles in higher levels of the social ecological model (e.g., system- and organizational- levels) speaks to the influence of environmental factors (vs. individual choice) in influencing the harms of problematic substance use in a population. Overall, this model can be used as a roadmap to creating sustainable, comprehensive (across all levels) change to problematic substance use in HPEC.

This situational assessment informed the development of several recommendations:

Policy Advocacy

- Advocate for local healthy public policies that create supportive environments for people who use drugs.
- Advocate for municipal public health policies that are supportive of harm reduction.
- Advocate for the increased allocation of provincial government resources to support mental health, addictions, and harm reduction in HPEC.

Stakeholder Engagement

- Engage multi-sectoral community stakeholders, including people with lived experience, in the development of a regional harm reduction strategy for illicit substances (see Knowledge Exchange).
- Meaningfully engage people with lived experience in all stages of substance use and harm reduction program development.

Prevention of Problematic Substance Use

- Focus on upstream interventions to address the social determinants of problematic substance use and their intersections.

System Reorientation

- Collaborate with Ontario Health to explore potential opportunities to reorient existing HPEC mental health, addiction, and harm reduction services to ensure that people who use drugs receive the care that they need.
- Support efforts to improve system navigation at system and/or organizational levels.

Public Awareness and Stigma Reduction

- Work with local community stakeholders to develop an evidence-based, multi-faceted anti-stigma campaign.
- Explore existing communication approaches regarding the Good Samaritan Law.
- Develop a communication strategy to raise public awareness of the dangers of local drug contamination and/or increased rates of overdose.

Monitoring and Surveillance

- Collaborate with local community partners to develop an integrated surveillance system for accurate and timely identification of substance-related harms within HPEC.
- Conduct ongoing monitoring of harm reduction program performance measures to assess the need for program adjustment, as new evidence becomes available.

Capacity Building

- Increase the capacity of local community organizations serving people who use drugs to conduct health equity impact assessments of their programs and services.
- Support local community organizations in developing organizational policies that facilitate access to mental health, addiction, and harm reduction services.
- Explore drug strategy models as a community framework to integrate prevention, treatment, and enforcement recommendations identified with those of harm reduction.

Service Delivery

- Continue to provide naloxone training. Evaluate knowledge retention of naloxone training over time, how training is being approached by dispensing organizations, and reassess the need for re-training.
- Continue to increase the number and variety of community organizations involved in naloxone kit distribution in accordance with the Ontario Naloxone Program.
- Increase the number of sharps disposal sites that are available throughout HPEC.
- Increase the number of NEP distribution sites across HPEC. Decisions should be informed by people who use drugs, taking into consideration the most accessible hours and locations.

Knowledge Exchange

- Develop a robust knowledge exchange strategy to communicate the findings of the situational assessment.
- Consider hosting educational events to update care provider knowledge of the current evidence surrounding best practices for harm reduction.

INTRODUCTION

Opioids are a broad group of natural and synthetic substances that activate special opioid receptors in the brain, releasing signals that depress the central nervous system (CNS) (13). As CNS depressants, opioids reduce feelings of pain and have the potential to induce euphoria (i.e., feeling high) (13,24). Opioids can be prescribed medications but can also be produced or obtained illegally. Opioid medications are primarily prescribed and used to treat pain, but they also have other clinical indications such as cough and diarrhea (24). Opioid medications are available in many different strengths (i.e., short and long acting) and formulations (e.g., syrups, tablets, patches); examples include codeine, morphine, hydromorphone, and fentanyl (23).

Problematic use of opioids can involve using an opioid medicine improperly (e.g., taking more than is prescribed), using an opioid medicine that has not been prescribed to a particular individual, or using an illegally obtained or produced opioid (e.g., heroin). An opioid use disorder is a type of substance use disorder that is defined by continued use of opioids despite continued negative consequences, including clinically significant impairment and distress (16, 24). Continued use of opioids is associated with physical dependence, which causes individuals to experience severe withdrawal symptoms when they stop using the drug or lower their dose too quickly. With continued use, larger doses of opioids are needed to experience the same levels of pain reduction or euphoria due to the tolerance that develops within the brain's special opioid receptors.

The risk of opioid overdose increases as dose amount increases, as well as when opioids are taken with other CNS depressants (e.g., alcohol). As with CNS depressants, opioids reduce the rate of respiration. Overdose occurs when an individual's breathing rate has slowed too much, causing the body to be deprived of oxygen. Overdose can lead to a number of complications, including brain damage and death.

THE OPIOID CRISIS

The opioid crisis in Canada is a complex issue that originated with the over-prescription of opioid medications by physicians and has been perpetuated through the introduction of strong synthetic opioids in the illegal drug supply (e.g., fentanyl, carfentanil) (25). In the 1980s, Canada saw a 3,000% increase in opioid medication prescriptions. By 2016, Canada had become the second largest consumer of prescription opioid medications in the world (26). Illegal importation of drugs largely comes from internet sales in China and is very challenging to control (27). Illegal fentanyl and carfentanil are inexpensive and only small amounts are needed to produce a significant effect, which is strongly appealing to the street market (27). The strength of fentanyl and carfentanil (100 times and 1,000 times more potent than morphine, respectively) has contributed to a major increase in opioid-related emergency room visits and opioid-related deaths across the country (27). Between 2013 and 2018, opioid-related harms in Canada increased by 27% (28). In 2017, Belleville had the sixth highest age-adjusted rate of opioid poisoning hospitalizations per 100, 000 people when compared to all other Canadian census subdivisions (28).

OTHER DRUGS

There are three reasons why it is important to consider the opioid crisis within the context of other drug use. First, use of non-opioid drugs has overlapping harms and demographics that can be addressed with the problematic use of opioids through common strategies and services. People who participate in problematic opioid use may also engage in the problematic use of other substances. Secondly, people who use opioids may use other drugs, simultaneously, to achieve a desired effect. Polysubstance use is typically much more dangerous than single-substance use, as certain combinations can increase the risk of overdose. Thirdly, it is increasingly common for non-opioid drugs to be contaminated with opioids such as fentanyl, thereby increasing the risk of overdose.

BACKGROUND

Population health data provides information necessary to understanding the health status of populations, including the evolving conditions that contribute to the public's health and well-being. Due to the continued and rapid increase in opioid overdoses across the country and province, there is an immediate need to collect opioid and drug use information at the local level to effectively respond to the trends occurring in communities. Currently, there are significant gaps in local- and regional-level data related to problematic opioid and other drug use. The most relevant data available at the local level is from the Canadian Community Health Survey (CCHS), where individuals 15 years and older self-report using substances. However, the CCHS has two major limitations in this context. First, it does not specifically identify the use of opioids and, secondly, it uses self-reported data collection via phone interviews. Individuals are less likely to self-report socially undesirable behaviour, such as substance use, in a phone interview. As such, data from the CCHS is likely to underrrepresent the true landscape of opioid and other drug use.

A second form of data available at the local level is emergency department (ED) visits and hospitalizations related to opioid overdose, which are available in National Ambulatory Care Reporting System and the Discharge Abstract Database from the Canadian Institute of Health Information. Though this information is supportive, it only informs of opioid overdoses where the individual sought medical assistance. Data from coroner reports is also available; however, due to the nature of this data source, data is untimely and difficult to access.

Lastly, there is data regarding the prescription of opioid medications and opioid agonist therapies available from the Ontario Opioid Prescription Tool from the Ontario Drug Policy Research Network and the Institute of Clinical Evaluative Sciences. The limitation of this tool is that it cannot quantify non-prescribed opioid use. The available information related to drug use, opioid-related harms, and opioid medication prescriptions from these data sources is summarized in the following sections.

SELF-REPORTED DRUG USE

Although CCHS findings have limitations, they demonstrate that drug use is generally higher in Hastings and Prince Edward Counties (HPEC) than in Ontario. Findings also indicate that problematic opioid use is not an isolated issue, as many other drugs are used in HPEC that contribute to individual and societal harms (Table 2).

Table 2. Estimated percentage of individuals who have tried or used drugs by type for HPEC and Ontario

	Estimated % (95% Confidence Interval)	Sample Size	Estimated % (95% Confidence Interval)	Sample Size
Any illicit drug	15.7 (12.0-19.5)	89	13.1 (12.5-13.7)	3,985
Amphetamines	6.1 [D] (3.0-9.2)	27	3.0 (2.6-3.3)	945
Marijuana (any use)	47.5 (42.9-52.1)	264	38.6 (37.6-39.6)	11,781
Marijuana (more than once)	37.7 (33.2-42.1)	219	31.2 (30.3-32.1)	9,384
Cocaine or crack	9.6 [C] (6.2-13.0)	49	7.1 (6.6-7.6)	2,089
MDMA (ecstasy)	3.9 [D] (1.2-6.6)	22	5.1 (4.7-5.5)	1,295
Hallucinogens, PCP, or LSD	12.2 (8.7-15.6)	70	10.0 (9.4-10.5)	3,126

Source: (29) **Note:** Illicit drugs include amphetamines, cocaine or crack, MDMA, hallucinogens, PCP, or LSD, and sniffing glue, gasoline or other solvents. Estimates marked with [C] and [D] should be used with caution as they may not be representative due to low sample sizes and high sampling variability. Label [D] indicates smaller sample sizes/greater degrees of sampling variability.

OPIOID-RELATED EMERGENCY DEPARTMENT VISITS AND HOSPITALIZATIONS

Emergency department visits and hospitalizations quantify the opioid-related burden on the health care system and help to demonstrate the impact of opioids on health in HPEC.

Over the past 10 years, the rate of ED visits in HPEC has often been significantly higher than the Ontario rate (Figure 1). As of 2018, opioid-related ED visits were at an all-time high provincially at 63.4 visits per 100,000 population and Hastings Prince Edward Public Health (HPEPH) had a similar rate of 63.0 visits per 100,000 population. Current rates of opioid-related ED visits are more than double the rate of opioid-related ED visits in 2014 (ED visit rate ratio [RR] 2018 compared to 2014: Ontario 2.6; HPEC 2.0). Preliminary data for 2019 indicates that opioid-related ED visit rates will be higher than 2018 for both HPEC and Ontario. For HPEC, Q1 ED visits for 2019 are double that of Q1 for 2018 (30).

Figure 1. Opioid-related ED visit rates per 100,000 population in Ontario and HPEC
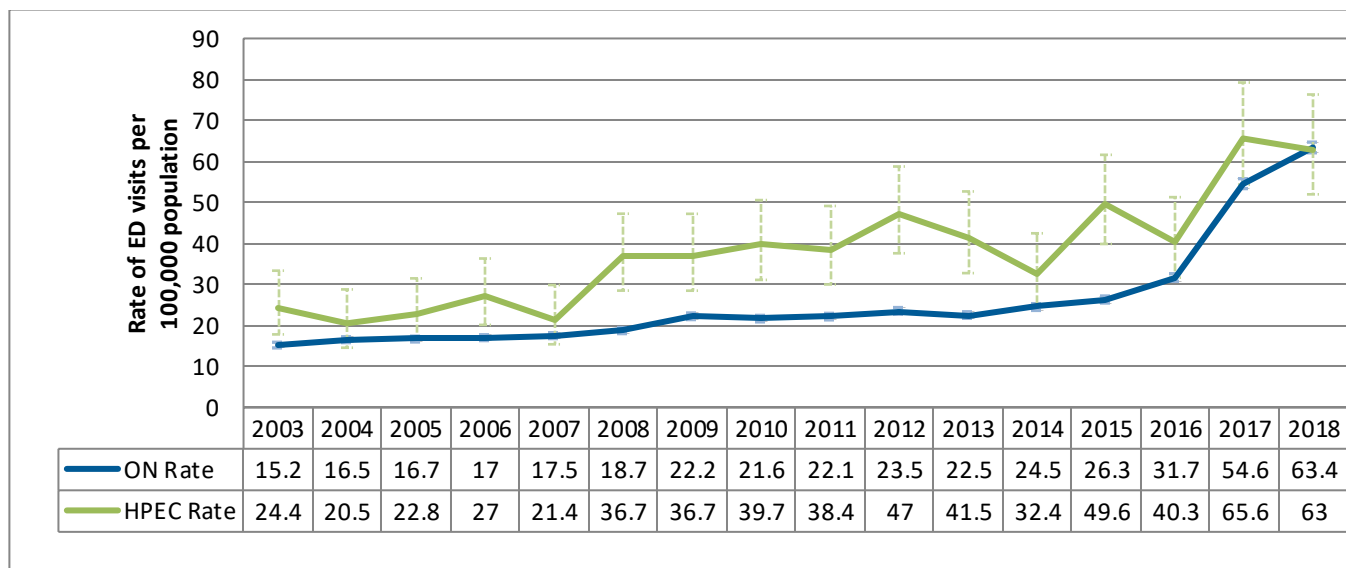
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
ON Rate	15.2	16.5	16.7	17	17.5	18.7	22.2	21.6	22.1	23.5	22.5	24.5	26.3	31.7	54.6	63.4
HPEC Rate	24.4	20.5	22.8	27	21.4	36.7	36.7	39.7	38.4	47	41.5	32.4	49.6	40.3	65.6	63

Source: (30). **Note:** The error bars ( ) represent 95% confidence intervals of the rates. If the error bars for HPEC do not overlap the error bars for Ontario for any year, then the rate in HPEC is significantly higher than Ontario. Otherwise, the difference is not significant and may have resulted by chance.
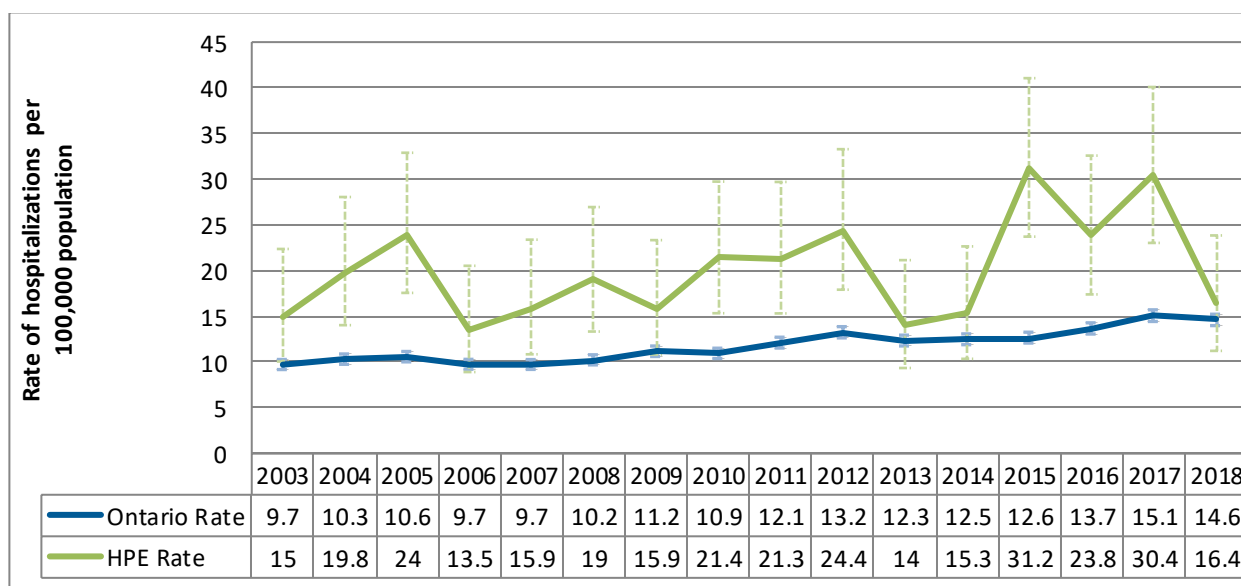
In the past 10 years, rates of opioid-related hospitalizations in HPEC have frequently been significantly higher than the provincial average (Figure 2). In 2017, HPEC experienced an all-time high for opioid poisoning hospitalizations and was double the provincial rate (Ontario 15.1 per 100,000 population; HPEC 30.4 per 100,000 population; RR 2.0). In this same year, Belleville ranked sixth of all census subdivisions (municipalities) in Canada and second in Ontario for opioid-related hospitalizations (23 hospitalizations; 45 hospitalizations per 100,000 population). Belleville was the only municipality within HPEC that was ranked in this report (28).

Figure 2. Opioid-related hospitalization rates per 100,000 population in Ontario and HPEC

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Ontario Rate	9.7	10.3	10.6	9.7	9.7	10.2	11.2	10.9	12.1	13.2	12.3	12.5	12.6	13.7	15.1	14.6
HPE Rate	15	19.8	24	13.5	15.9	19	15.9	21.4	21.3	24.4	14	15.3	31.2	23.8	30.4	16.4

Source: (30). **Note:** The error bars ( ) represent 95% confidence intervals of the rates. If the error bars for HPEC do not overlap the error bars for Ontario for any year, then the rate in HPEC is significantly higher than Ontario. Otherwise, the difference is not significant and may have resulted by chance.

In 2018, hospitalizations in HPEC decreased to 16.4 per 100,000 population (from 30.4), compared to 14.6 per 100,000 provincially (from 15.1). Although the reason for this decrease is unknown, there can be speculation that with the increase in ED visits and deaths in 2018, more patients were being discharged home from the ED, or dying, instead of being admitted.
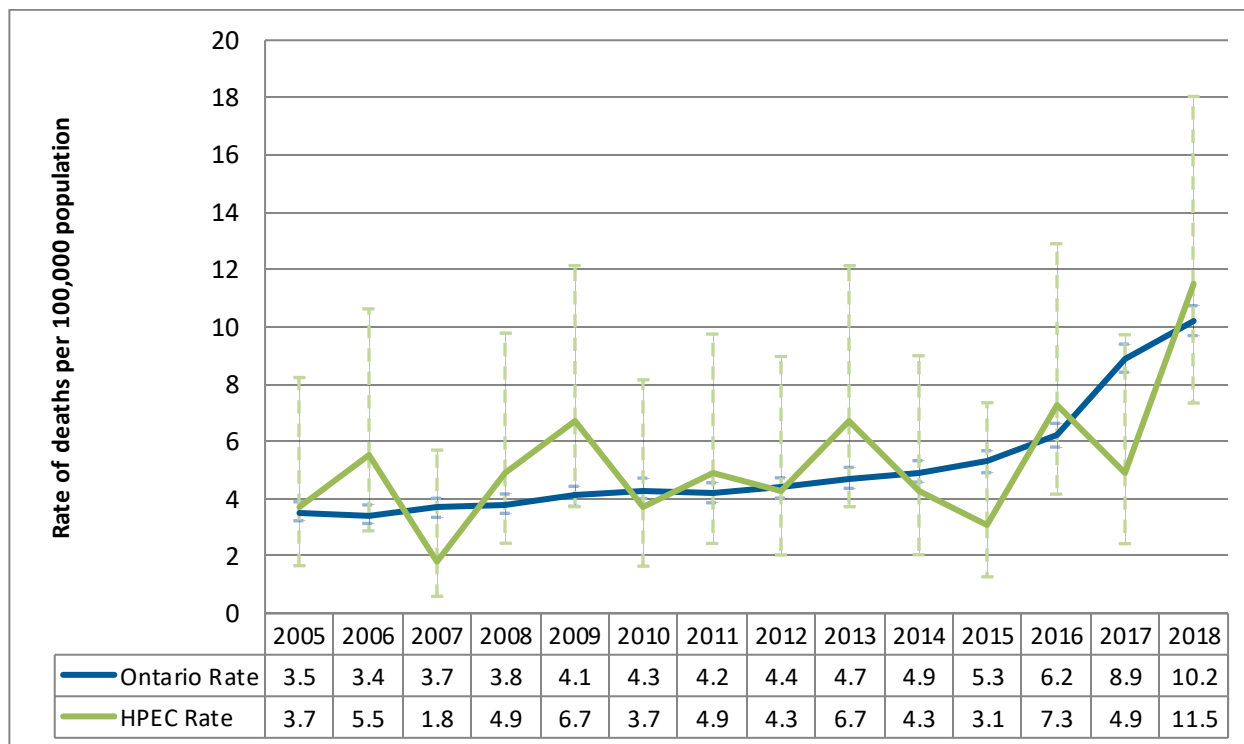
OPIOID-RELATED DEATHS

The number of opioid-related deaths has ranged from three in 2005, to a historic high of 19 in 2018 (Figure 3) (31). Based on preliminary cause of death data for the first quarter of 2019, death rates for 2019 will be similar to 2018.(30). Due to small sample sizes, there is a large amount of variability in opioid-related death rates for HPEC. As a result, there are no significant differences when comparing HPEC rates to provincial rates.

In 2018, 89.9% of opioid-related deaths in Ontario were categorized as accidental, 7.5% as intentional/suicide, and 2.6% as undetermined. During the same period, 94.7% opioid-related deaths in HPEC were categorized as accidental (32). Fentanyl was present in 69% (1017) of opioid-related deaths in Ontario (30) in 2018. It is possible the recent increase in deaths in HPEC is due to the introduction of fentanyl and its analogues into the street drug supply. In 2017, Health Canada found fentanyl or fentanyl analogues in more than 50% of heroin samples tested by the Health Canada Drug Analysis Service, as well as in samples of methamphetamines and cocaine (26).

It is also important to note that in HPEC, almost 80% of all opioid-related deaths between 2014 – 2018 occurred in males (32). More specifically, of the male deaths, 51% were among those aged 45-64 years, closely followed by those aged 25-44 years (44%) (32). Males also represent a greater proportion of opioid-related deaths in Ontario (70%), and males aged 25-45 years represent a greater proportion of deaths provincially compared to any other age category (32).

Figure 3. Opioid-related death rates per 100,000 population in Ontario and HPEC

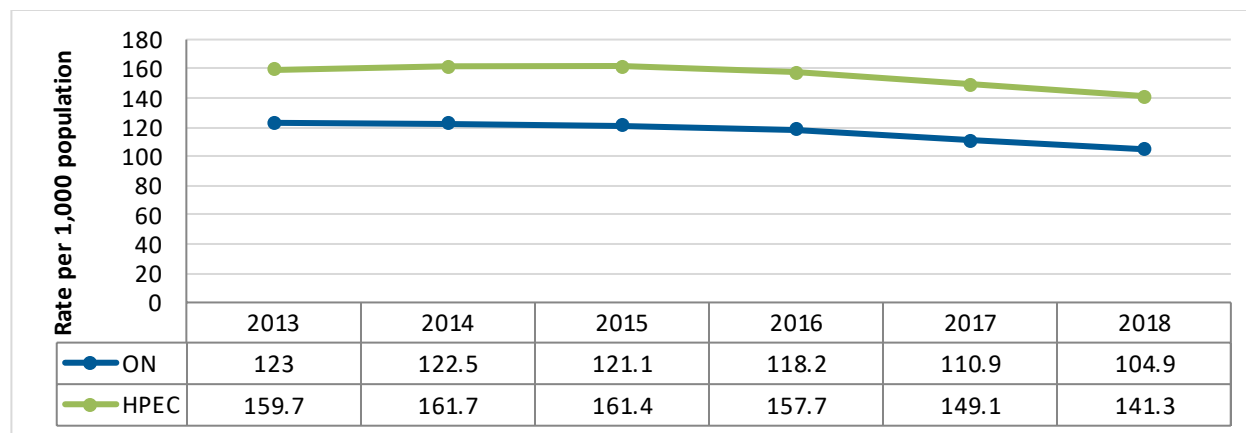|	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Ontario Rate	3.5	3.4	3.7	3.8	4.1	4.3	4.2	4.4	4.7	4.9	5.3	6.2	8.9	10.2
HPEC Rate	3.7	5.5	1.8	4.9	6.7	3.7	4.9	4.3	6.7	4.3	3.1	7.3	4.9	11.5

Source: (30). **Note:** The error bars ( ) represent 95% confidence intervals of the rates. If the error bars for HPEC do not overlap the error bars for Ontario for any year, then the rate in HPEC is significantly higher than Ontario. Otherwise, the difference is not significant and may have resulted by chance

OPIOID PRESCRIPTION RATES

In both HPEC and Ontario, opioid prescription rates for pain have decreased from 2013 (Ontario 123.0 per 1,000 population; HPEC 159.7 per 1,000 population) to 2018 (Ontario 104.9 per 1,000 population; HPEC 141.3 per 1,000 population) (Figure 4).

Figure 4. Opioid prescription rates for pain per 1,000 population in Ontario and HPEC

Rate per 1,000 population	2013	2014	2015	2016	2017	2018
ON	123	122.5	121.1	118.2	110.9	104.9
HPEC	159.7	161.7	161.4	157.7	149.1	141.3

Source: (33)

Another important opioid surveillance indicator is the percentage of individuals who are prescribed opioids with a high daily dose. Any opioid dosage at or above 50 morphine milligram equivalents (MME) per day increases the risk for overdose by at least two times (34). A 9% decline in the proportion of individuals prescribed a high daily dose for pain was observed between 2013 and 2018 in both HPEC and Ontario; however, the proportion of opioid recipients receiving high daily dose prescriptions in HPEC is consistently higher than the province. For example, in 2018, 56% of long-acting opioid recipients in HPEC were receiving a high daily dose compared to 52% in Ontario (Figure 5).

Figure 5. Percentage of long-acting opioid recipients receiving high daily doses in Ontario and HPEC

Percentage of long-acting opioid recipients receiving high daily doses	2013	2014	2015	2016	2017	2018
ON %	61.3	60.2	58.6	56.9	55	52.2
HPEC %	65	64.4	63.4	63	59.9	56.4
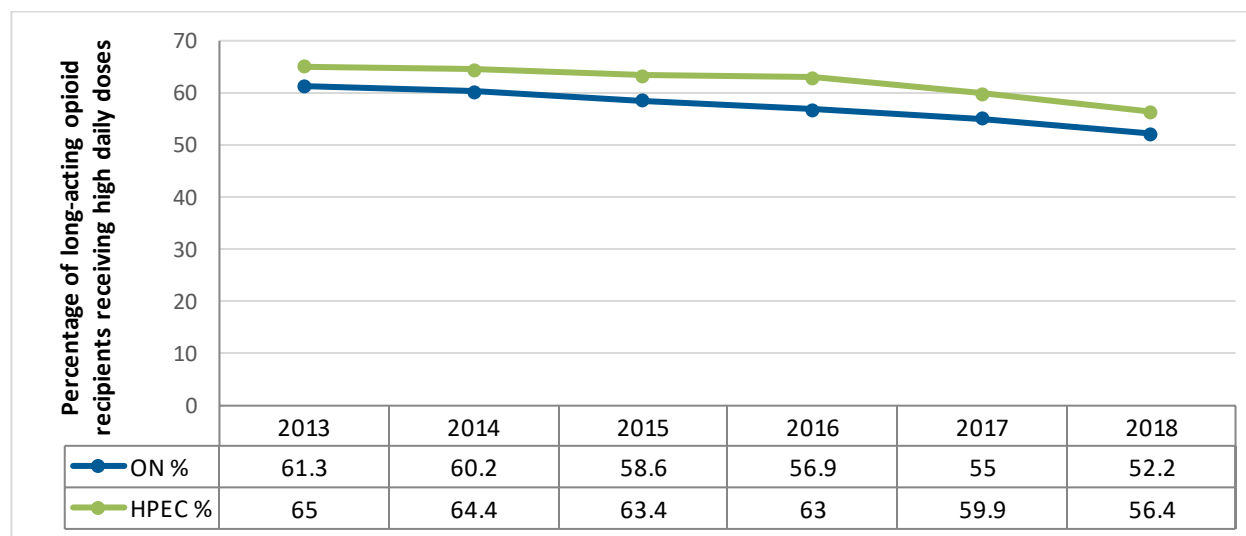
Source: (33)

When comparing the decreasing trend in opioid prescribing with increasing opioid-related morbidity and mortality rates, it can be inferred that the additional opioid-related strain on the health care system is likely a result of non-prescription drug use. Granted, though the decreasing trend in opioid prescribing in HPEC may be attributed to the release of the Pan-Canada Opioid Prescribing Guideline in 2017, it is possible that it may also be affected by

decreasing access to local primary care physicians (34, 35). Changes to prescription guidelines and the lack of primary care leave individuals with inadequate support for pain management or opioid dependence, increasing the risk that they will turn to illicit drug use to meet these needs.
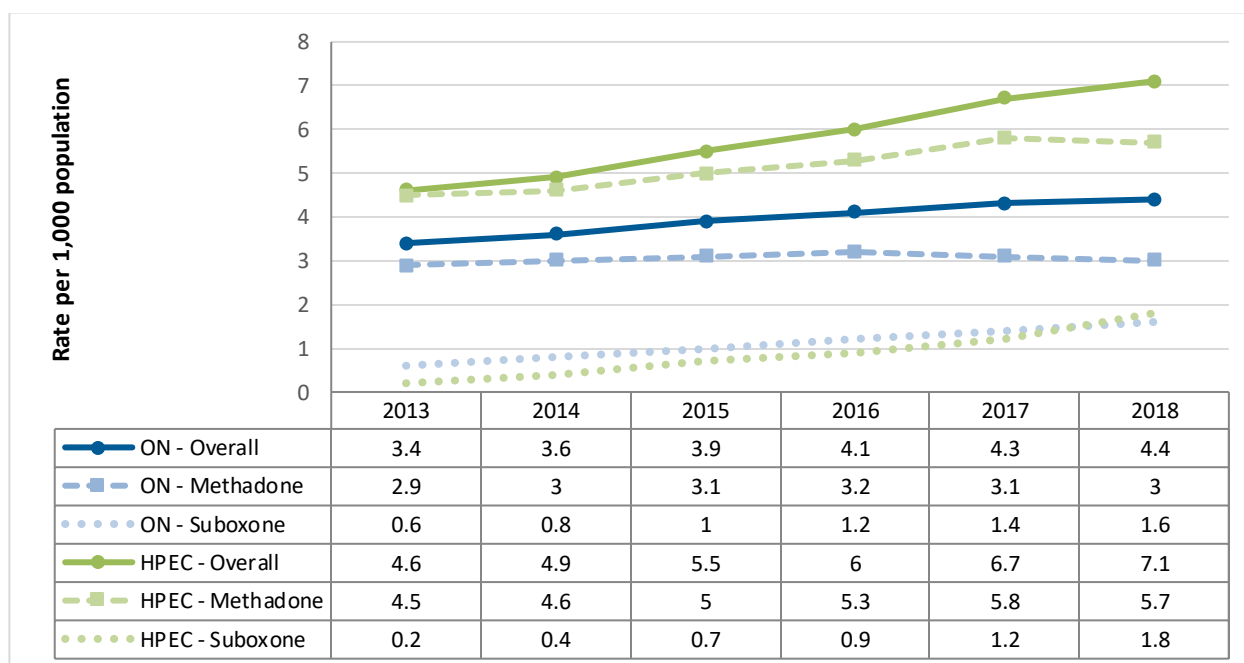
INDIVIDUALS PRESCRIBED OPIOID AGONIST THERAPY

Hastings and Prince Edward Counties have experienced a steady increase in individuals prescribed opioid agonist therapy (OAT). The number of individuals prescribed OAT in HPEC has increased from 758 individuals (4.6 per 1,000 population) in 2013 to 1,172 individuals (7.1 per 1,000 population) in 2018 (Figure 6). Not only have the rates been consistently higher in HPEC than in Ontario, but HPEC rates have also seen more significant increases over time. Ontario residents were prescribed opioid agonist therapies at a rate of 3.4 per 1,000 in 2013 and 4.4 per 1,000 in 2018.

Figure 6 also depicts the OAT prescribing rate by type of therapy. Suboxone became an approved OAT in Canada in 2011. Suboxone provides an alternative to traditional methadone treatment and cannot be misused (37). Initially, physicians required methadone exemption permits and special training to prescribe suboxone and medical coverage was only provided if methadone treatment was unsuccessful or if the waiting list for methadone was over three months long (37). In 2016, suboxone was approved for coverage under the Ontario Drug Benefit Program and became the recommended first line treatment for opioid use disorders, with family physicians now permitted to prescribe suboxone without additional training (37, 38).

Ontario's suboxone prescribing rates have consistently increased by a rate of 0.2 per 1,000 population, per year from 2013 to 2018. In 2018, HPEC surpassed the Ontario suboxone prescribing rate (Ontario 1.6 per 1,000 population; HPEC 1.8 per 1,000 population). Hastings and Prince Edward Counties' methadone prescribing rates decreased from 5.8 per 1,000 population in 2017 to 5.7 per 1,000 population in 2018. This mirrors the provincial trend in which the methadone prescribing rates also dropped from 3.1 to 3.0 per 1,000 population. The increase in suboxone prescribing is driving the increase in overall OAT prescribing observed in HPEC. These trends may also be attributable to the increase in OAT prescribers in HPEC from 124 to 242 (33).

Figure 6. OAT prescription rates per 1,000 population for Ontario and HPEC by type

	2013	2014	2015	2016	2017	2018
ON - Overall	3.4	3.6	3.9	4.1	4.3	4.4
ON - Methadone	2.9	3	3.1	3.2	3.1	3
ON - Suboxone	0.6	0.8	1	1.2	1.4	1.6
HPEC - Overall	4.6	4.9	5.5	6	6.7	7.1
HPEC - Methadone	4.5	4.6	5	5.3	5.8	5.7
HPEC - Suboxone	0.2	0.4	0.7	0.9	1.2	1.8

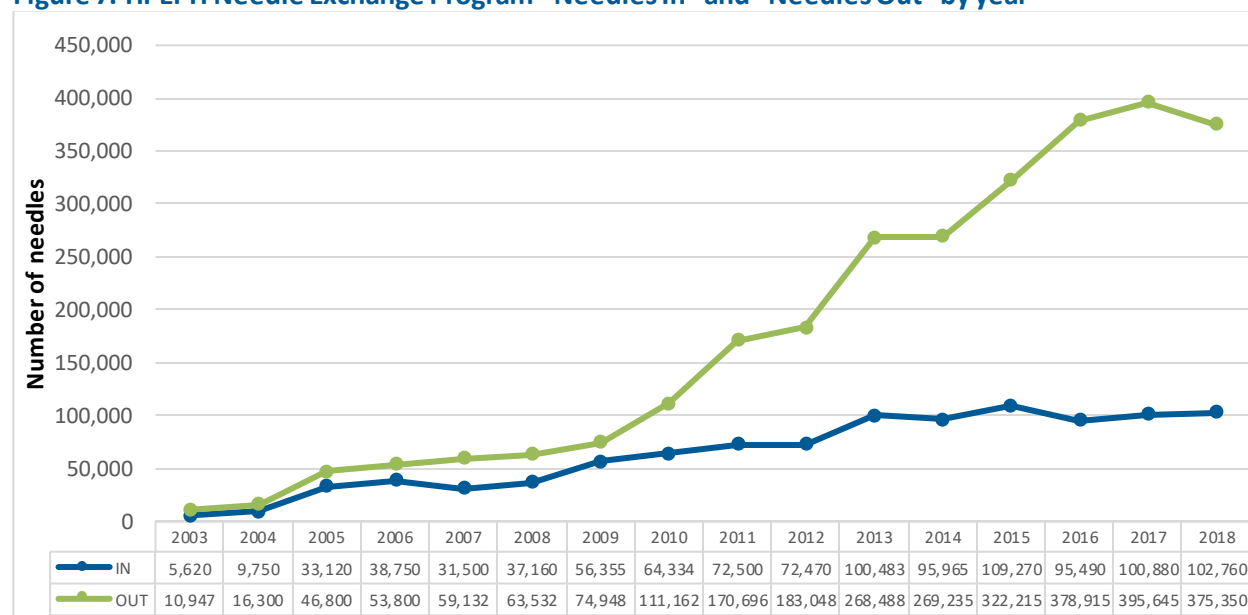**Source:** (33) Opioid and Other Drug Harm Reduction

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HARM REDUCTION SUPPLY PROGRAM

Two efforts that HPEPH has undertaken to reduce the harms associated with opioids and other drugs in HPEC are the Needle Exchange Program (NEP), and the distribution of naloxone kits facilitated through the Ontario Naloxone Program. Naloxone is an antidote administered to temporarily reverse an opioid overdose.

Needle Exchange Program

The HPEPH NEP was initiated in 2003 (Figure 7). The purpose of the NEP is to prevent the sharing of needles and spread of infection, and to promote safe disposal. Every year, the number of needles given out and returned has increased, and HPEPH has continued to expand sites to support client access to supplies, including supplies for safer use of injectable drugs and the addition of safer inhalation kits as of May 2019. The steady increase in clean needle distribution indicates the success of the NEP; however, the needle return rate continues to be a concern. In 2010, there were 1.3 needles distributed for each needle returned to an HPEPH NEP site. The gap in the return rate has increased substantially over time, culminating in 3.7 needles being given out for each needle returned in 2018.

Figure 7. HPEPH Needle Exchange Program "Needles In" and "Needles Out" by year

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
IN	5,620	9,750	33,120	38,750	31,500	37,160	56,355	64,334	72,500	72,470	100,483	95,965	109,270	95,490	100,880	102,760
OUT	10,947	16,300	46,800	53,800	59,132	63,532	74,948	111,162	170,696	183,048	268,488	269,235	322,215	378,915	395,645	375,350

Source: Needle Exchange Program data collected by HPEPH.

Naloxone Distribution Program

In June 2016, pharmacies across Ontario began distributing naloxone kits as a part of the Ontario Opioid Strategy (Table 3). In 2016, HPEPH was also approved as a naloxone distribution site and, in August of 2018, started training external community organizations to distribute naloxone through the Lifesaver Program. Currently HPEPH has partnered with 7 organizations, for a total of 16 sites throughout the area (Appendix A). Target sites chosen for naloxone distribution and training are those that have frequent interactions with people who use drugs and meet the eligibility criteria set out by the Ministry of Health and Long-Term Care (MOHLTC). These sites include Aboriginal Health Access Centres, AIDS service organizations, community health centres (CHCs), outreach programs, withdrawal management programs, shelters, St. John Ambulance branches, police stations, fire stations, and hospitals with EDs and urgent care centers (40).

Table 3. Counts and rates per 1,000 population of distributed naloxone kits

	2016		2017		2018		Q1 Q2 2019	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate
HPEPH	39	-	166	-	326	-	568	-
HPEC Pharmacies	35	0.5	713	4.3	876	7.7	519*	-
Ontario Pharmacies	7,066	0.2	60,523	4.4	110,612	5.3	54,777*	-

Source: (33) *January-April 2019

Although the distribution of naloxone kits in the community is increasing, opioid-related overdoses and deaths continue to rise. This is evidence that the distribution of naloxone kits alone is not enough to mitigate opioid-related harms. Additionally, overdoses involving more toxic opioids, such as fentanyl and carfentanil, often require multiple administrations of naloxone and the use of more than one kit. A 2017 study using emergency medical services (EMS) surveillance data found that the need for multiple naloxone administrations was highest in regions of the United States with higher fentanyl testing submissions (41).

PROBLEMATIC SUBSTANCE USE, MENTAL HEALTH, AND THE SOCIAL DETERMINANTS OF HEALTH

The social determinants of health (SDOH) are the social, environmental, and economic factors, as well as the individual behaviours and conditions that interact to influence the health of individuals and communities (18). Collectively, the SDOH determine the population's health status. The following is a list of widely used and accepted determinants as identified in the Ontario Public Health Standards (42):

- Access to health services
- Culture, race and ethnicity
- Disability
- Early childhood development
- Education, literacy, and skills
- Employment, job security, and working conditions
- Food insecurity
- Gender identity and expression

- Housing
- Income and income distribution
- Indigenous status
- Personal health practices and resiliency
- Physical environments
- Sexual orientation and attraction
- Social inclusion and exclusion
- Social support network

As with many health conditions, problematic substance use is strongly influenced by the SDOH. Health risk behaviours, as well as the social and physical environments, can intensify the health consequences of problematic substance use. Risk factors for problematic substance use include an individual's genetic composition, experiences of trauma, cultural influences, and social factors, such as poverty and social isolation, along with poor access to health services (43). Many protective factors within the SDOH interact to decrease an individual's likelihood of developing problematic substance use behaviours or substance use disorders, such as having a positive role model or having a reliable network of support.

GOALS OF THE SITUATIONAL ASSESSMENT

In October of 2016, the MOHLTC released the first Comprehensive Strategy to Prevent Opioid Addiction and Overdose for Ontario. The strategy included provincial plans to enhance opioid-related data collection and surveillance, modernize opioid prescribing and dispensing practices, improve access to high quality addiction and treatment services, and augment harm reduction services and supports (44). In August of 2017, the MOHLTC announced that Public Health Units would be accountable to support the harm reduction pillar of the strategy via the Harm Reduction Enhancement Program. One of the three required components of the program is a local opioid response that maintains and expands opioid-related programming, based on an assessment of data and community needs (16).

The goal of the situational assessment is to better understand local trends in opioid and other drug use, the barriers and facilitators to accessing services that reduce the harms experienced by people who use opioids and other drugs, and to identify potential solutions to address problematic use of opioids and other drugs in HPEC. The information gathered will inform program planning and service distribution at a community level among HPEPH and other harm reduction services.

RESEARCH QUESTIONS

To achieve the goals and objectives of the situational assessment, the following research questions were explored:

1. What are the characteristics of opioid and other drug use within Hastings and Prince Edward Counties?
2. What are the impacts of opioid and other drug use on the health and well-being of people in Hastings and Prince Edward Counties?
3. What are the barriers and facilitators to accessing treatment and harm reduction services for opioid and other drug use within Hastings and Prince Edward Counties?
4. What are the opportunities for community improvement to reduce the harms associated with opioid and other drug use, from the perspective of someone with lived experience and the agencies that serve them?

PROCEDURES

Four methods of data collection were planned to help answer the research questions identified for this project: a retrospective chart review of the Lifesaver Program (HPEPH naloxone distribution program), key informant interviews with community stakeholders, focus groups with individuals with lived experience, and surveys of individuals with lived experience.

The research proposal for this situational assessment was reviewed for compliance with the HPEPH Scientific and Ethical Review Policy and subsequently sent to the Loyalist College Research Ethics Board, where approval for assessment was granted.

Retrospective Chart Review of the Lifesaver (Naloxone) Program

To aid in identifying the types of drugs being used within HPEC, a retrospective chart review of the HPEPH Lifesaver Program client assessment forms was planned. Individuals who accessed the Lifesaver Program were assessed for their history of drug use, history of opioid overdose, and history of naloxone use. An electronic, password-protected data collection tool was developed to guide data collection during the chart review. Only the Lifesaver Program nursing staff and the principal investigator had access to the tool and client charts. Files were stored on HPEPH secure internal servers.

The plan was to collect retrospective data from all Lifesaver Program charts from December 1, 2016 to December 31, 2017. The estimated sample size was 160 charts. Preliminary review of the Lifesaver Program during this period showed that data collection needs of the chart review process were not met. As a result, the Lifesaver Program chart review process and its preliminary findings were omitted.

Key Informant Interviews with Community Stakeholders

Interviews were conducted with HPEC community stakeholders. An initial list of potential key informants was compiled by the research team from local service providers/organizations who provide services to people who use drugs within HPEC. A variety of service providers were included in the interviews and a geographic range of key informants representing the various communities in HPEC were engaged to ensure data collection across the region.

Recruitment of key informants was achieved using a mixed methodology of convenience sampling and snowball sampling. The primary convenience sample was recruited via existing communication channels from the Harm Reduction Task Force, North Hastings Harm Reduction/Opioid Response Committee, and other HPEPH harm reduction partners. Potential key informants were contacted by telephone and/or email to participate in the

project. A copy of the information letter and consent form to be signed and returned to the principal investigator, prior to scheduling an interview, was sent electronically to each potential key informant. After consent was received, each key informant was provided with a copy of the interview guide at least one week prior to the interview to allow adequate time to formulate their responses. Additional key informants were identified via snowball sampling: each key informant from the original convenience sample was asked to recommend any stakeholders they felt could inform the project. Key informant interviews continued until it was concluded by the research team that a range of stakeholders who provide services to individuals who use opioids or other drugs across HPEC had been engaged.

A total of 16 key informant interviews were facilitated across a range of service providers from Belleville, Picton, Bancroft, and Trenton. Aside from one interview that was transcribed by hand, and one interview that took place face-to-face at the request of the participant, interviews were completed by phone and were audio-recorded. Recordings were then securely transferred to a third-party transcription company and returned in accordance with the Personal Health Information and Protection Act (PHIPA). Next, transcriptions were entered into a Microsoft Excel Spreadsheet, coded, and analyzed using thematic analysis.

Focus Groups with Individuals with Lived Experience

Focus group participants were recruited using a mixed methodology of convenience and snowball sampling. Postcards promoting the focus groups were included in HPEPH's NEP kits, and posters were placed in social service centres across HPEC. Paid community outreach workers used existing social connections to distribute postcards to people with lived experience.

Focus groups were held at Peer Support South East Ontario locations, as these were identified to be safe spaces where participants would feel comfortable. Upon arrival, participants were provided with an information letter, consent form, and screening questions. Participants were asked to read the information letter and consent form, in full, before completion. Participants also had the option to have the documents read to them. Participants were given adequate time to complete the screening questions and consent forms before returning them to the research team. Before commencing the question period, forms were reviewed by the research team to ensure completion to confirm that the participants met the screening criteria of having a past or current history of drug use and were above the age of majority (18 years).

To achieve higher recruitment rates and acknowledge participants' contributions, all focus group participants were compensated with a $20.00 Visa gift card. Individuals who did not wish to participate after reviewing the information letter and consent form were provided with a $5.00 Tim Horton's gift card for their time. Each focus group had a maximum of ten participants. Individuals arriving after the tenth participant completed their forms were informed that the focus group was full; they were given a $5.00 Tim Horton's gift card for their interest. Following completion of the focus group, participants were provided with a "LINK" card listing the community resources for mental health and addictions support within HPEC.

Focus groups were facilitated by two research team members who used a semi-structured interview guide. All focus groups were conducted face-to-face and were audio-recorded. Recordings were then securely transferred to a third-party transcription company and returned in accordance with the PHIPA. Transcriptions were entered into a Microsoft Excel spreadsheet and were coded and analyzed using thematic analysis.

A total of six focus groups were held in the HPEC communities of Madoc, Picton, Bancroft, Trenton, and two in Belleville. The results of one focus group in the Belleville area were not included in the analysis as it became evident during the data collection that the participants did not qualify for the study and were thus excluded.

Surveys of People with Lived Experience

Paper surveys were made available for a period of 30 days at one Ontario Addiction Treatment Centre (OATC) location in Belleville and one OATC location in Bancroft. The paper surveys were made available for an additional 30 days at the Bancroft OATC location. An online version of the survey was made available between May and August 2017 and promoted via the focus group postcard and poster.

At the OATC locations, individuals checking in with reception were offered the opportunity to complete a survey. Those interested in participating were provided with a blank paper survey and return envelope. Once a completed survey was returned to the receptionist in the sealed envelope, participants were provided a LINK card and a ballot for entry into a draw to win one of fifteen $20.00 Visa gift cards. Completed surveys and ballots were placed in a locked filing cabinet for secure storage until they were retrieved by the principal investigator at the end of the survey period.

All paper copies of the surveys were shredded after the research team entered the data into an online survey program, CheckMarket Surveys. Screening questions from the paper surveys were deleted prior to the analysis of the survey results. Compiled raw data from the survey was extracted from CheckMarket and will remain the property of HPEPH and be retained on secure internal servers for seven years, as per HPEPH document retention policies.

The survey (paper and online) had a total of 34 respondents. It was decided through consensus within the research team that the results from the surveys would not be reported due to the small sample size and biases resulting from the data collection process. As respondents were exclusively recruited from two OATC locations, there was a high risk of sampling bias, and the survey results could not be considered representative of the broader community of people who use drugs in HPEC. For example, OATC clients might be less likely to currently use drugs or more likely to indicate safer drug use practices due to their connection to services. Additionally, geographic representation was lacking given that surveys were only collected in Belleville and Bancroft. Responses to experience-based questions about discrimination, social support, and barriers to accessing services and programs were reviewed to ensure consistency with the thematic analysis of the key informant interviews and focus groups.

FACTORS CONTRIBUTING TO THE OPIOID CRISIS AND PROBLEMATIC SUBSTANCE USE

Access to Substances

Prescribing Practices

Patterns of physician prescribing practices were identified by focus group participants as contributing to problematic substance use and by key informants as contributing to the widespread opioid crisis. Focus group participants detailed personal experiences and peer experiences in which physicians prescribed large quantities of opioid medications for chronic pain management. Focus group participants stated that physicians did not initially explain how opioids should be used for pain management, side effects, or the possibility of developing physical or psychological dependence. Additionally, focus group participants described a lack of physician follow up related to their opioid prescriptions. Key informants and focus group participants stated that prescription opioids could also be accessed through illegal channels, such as the theft or forgery of prescriptions.

Key informants and focus group participants were aware that opioid prescription regulation has increased and that many physicians have adopted tighter prescribing practices. Both groups expressed that these changes have not likely reduced overall problematic substance use in individuals who were already misusing opioids, with many individuals turning to illicit street drugs (e.g., heroin) when prescription opioids became less available. Illicit drugs can be used as a new means of pain management for those struggling with chronic pain who are no longer prescribed opioids at the same dose. Street drugs have additional risks to individuals, including contamination with fentanyl and carfentanil, which increases risk of overdose.

Local Availability

Focus group participants and key informants described high availability and ease of access to a variety of prescription and illicit substances in HPEC. Although availability has decreased, prescription opioids remain available for problematic use through legitimate prescriptions; diversion of prescriptions (e.g., sharing, selling, or misusing); and theft. Some focus group participants described the practice of exchanging hours of labour for another individuals' prescribed opioids. Key informants noted that shipments of fentanyl and carfentanil from China to the illicit markets in North America have made these drugs increasingly available locally. Key informants and focus group participants stated that illicit substances are also trafficked from large city centres such as Toronto to local urban areas like Belleville, Trenton, and Kingston. Methamphetamine was mentioned by both groups as a specific problem in more rural areas where it is inexpensive to make for personal use and profitable to sell in rural and urban illicit markets. Some focus group participants had knowledge of tourists bringing illicit substances to rural parts of HPEC.

Access to Services

Key informants and focus group participants stated that mental health and addiction services, structures, and policies are inadequate to meet existing needs. Focus group participants stated that a lack of help for these issues contributes to initial and continued problematic substance use.

> "There is an opioid crisis, I agree, but I believe that it is not really an opiate crisis. It's an addiction and mental health crisis, and opiates are the crisis of the day." – Key Informant

Key informants stated that instead of receiving mental health counselling and trauma-informed care, criminalization causes people who use drugs to face consequences in the justice system.

Social Determinants of Health

The overlap between the "causes" and "consequences" of problematic substance use demonstrates that these factors are inter-related and cyclical. Some key informants classified the opioid crisis as a symptom of broader societal issues. Key informants discussed the existence of a health gradient in which those with lower socioeconomic status are more likely to experience poorer health and negative health behaviours such as problematic substance use. One key informant postulated that government response to the opioid crisis has been slow because the demographic of people who use drugs has not been prioritized in the health care system. Another key informant explained that health and social systems overemphasize individual responsibility for health.

> "If the root causes of these things are a history of trauma and being exposed to precarious living situations, homelessness, low income, then there's only so much that an individual can do." – Key Informant

Interpersonal Factors

Focus group participants described the role of interpersonal relationships in problematic substance use. Young people were said to be particularly influenced by peer pressure. Family conflict or a lack of social support can encourage individuals to seek support and companionship from friends who are using drugs. While this support is positive, it presents challenges for those trying to avoid using substances.

> "So, now I'm working on the mental side of it because a lot of that too will make you use again, because, you know, I told my husband, I said, 'I could find a cure for world hunger and I'd still be crap to family and friends,' and it sucks because I've done a lot of stuff that's been really good and that doesn't get recognized. It's hard, you know, and then you just go back to using and go with people that use and they don't judge you, so it's hard." – Focus Group Participant

A focus group participant also stated that problematic substance use can start or increase when an individual's romantic partner is using substances.

Personal Factors

Focus group participants recalled being prescribed opioids for pain resulting from work-related injuries. Key informants identified older adults as a demographic that is commonly prescribed opioids for chronic pain. Long-term use of opioids for pain management was described as creating physical dependence and building tolerance. Individuals experiencing pain might begin to use street drugs like heroin because they are typically stronger than prescription opioids. Increased opioid prescription regulation and tightened prescribing practices can influence physicians to taper patients' opioid prescriptions to a lower dose. This experience can be unpleasant due to the potential for withdrawal symptoms and can leave individuals seeking alternatives for pain management.

> "My experience has been opiates for sure, they are more predominant, and I think part of the reasoning behind that is that there's a lot of work here that's done that enables people to get, unfortunately, injured because there's a lot of logging." – Focus Group Participant

> "I had a workplace accident and it brought opioids back into my life because a doctor prescribed it and it found me in a detox centre." – Focus Group Participant

Focus group participants noted several individual factors that they believed contributed to problematic substance use. While some focus group participants and many key informants spoke to the influence of underlying emotional or mental health issues (e.g., childhood trauma), another focus group participant stated that an "addictive personality" creates a predisposition for problematic substance use. Focus group participants also stated that "self-esteem" and "will-power" impact an individual's ability to counter peer pressure or the urge to use substances to cope. Key informants did not speak to these factors.

> "And I noticed that with a lot of people, they are more influenced for people to push them to do it. Like they don't have the self-esteem to say, 'No, I'm not doing it,' and they just keep getting pushed to do it." – Focus Group Participant

CHARACTERISTICS OF PROBLEMATIC SUBSTANCE USE IN HASTINGS AND PRINCE EDWARD COUNTIES

Demographics

Key informants were asked to describe the demographics of the clients that they serve. Although it is acknowledged that respondents may represent organizations with mandates to serve specific populations, key informants made it clear that problematic substance use can be experienced by *any* demographic. Opioid use in HPEC crosses all ages, genders, sexes, socio-economic levels, and ethnicities. Among those who did identify a specific demographic, adults aged 30-65 years were the most frequently mentioned group, followed by young adults aged 20-30 years.

Types of Substances

Alignment was observed among key informants and focus group participants with respect to describing the substances being used in HPEC, with opioids as the drug classification most frequently mentioned, followed by stimulants (Table 4). Key informants had knowledge of substance use in HPEC through their service organizations and focus group participants spoke about their personal past or present substance use, as well as substance use of peers in HPEC. Although legal substances were described infrequently by both groups, cannabis and alcohol were mentioned more often than commercial tobacco.

Table 4. Substances used in HPEC, identified by participants, in order of frequency

Key Informants		Focus Group Participants	
Opioids	Fentanyl Heroin (including purple heroin) Oxycodone Percocet	**Opioids**	Oxycodone Percocet Hydromorphone Heroin Oxycontin Fentanyl
Stimulants	Crystal meth Cocaine Crack Crack cocaine Flakka	**Stimulants**	Crystal meth Cocaine Crack Meth

Among the few key informants who touched upon the topic of drug co-use, use of opioids together with stimulants (e.g., crystal meth, crack) or cannabis was described to be most common. Use of alcohol with opioids

was described by one key informant to be a rare occurrence among people who use drugs, due to the potential for adverse drug effects (e.g., liver failure, overdose).

Key informant and focus group participants perceived geographical differences in drug availability. Compared to participants representing rural regions of HPEC, those representing urban regions (Belleville and Quinte West) were more likely to perceive a greater spectrum of available drugs, particularly more potent drugs, such as fentanyl and crystal meth.

> "Trenton is the drug capital for crack right now, and coke, and that fentanyl and … Crystal meth and everything. It's … This town is a drug city. You get more drugs in here than you get in Belleville; it's sad." – Focus Group Participant

The availability of crystal meth was described as present in varying degrees within all geographical regions of HPEC. Focus group participants explained this was due to the drug's highly addictive properties, long duration of effect, and low cost to produce. Key informants felt that crystal meth is more prevalent in isolated areas and the high availability of crystal meth in these regions is suggestive of a local manufacturer. Individuals who use crystal meth were described as often being people who engage in problematic opioid use, with a key informant stating that meth is a last resort when an opioid user cannot access opioids or other cost-prohibitive drugs.

Routes of Administration

Injection and snorting were the routes of drug administration most frequently mentioned by key informants, followed by ingestion and inhalation. Routes of administration were commonly described as progressing from inhalation or snorting to injection, over time, as intravenous administration leads to more rapid drug effects. Although key informants reported opioids as most commonly injected or taken orally by their clients, some individuals were described as crushing opioids in pill format and snorting them to increase the speed of absorption.

Location of Substance Use and Presence of Others

Both key informants and focus group participants described substance use as most frequently occurring in private dwellings, whether in an individual's own place of residence, or the residence of a friend or family member. Consumption in "trap houses," or buildings where illicit drugs (e.g., crack) are purchased, sold, and/or produced, was described as common by key informants. The lack of safe, legal, public consumption sites provides people who use drugs with little choice but to do so in private locations, increasing the likelihood of using drugs in isolation with a higher potential for adverse outcomes (e.g., overdose).

Although mentioned less frequently, substance use in public locations also occurs in HPEC. Whereas focus group participants explained that public consumption occurs most often after dark, key informants elaborated that it can occur virtually anywhere within the community, e.g. in parked cars, on the street, or in parks. Public consumption was viewed as concerning by key informants, as it reflects the lack of a safer alternative within our communities and further perpetuates the stigma that is experienced by people who use drugs.

> "… Sometimes they don't have a place to hang out. They're doing it on the street, which then makes them be seen worse by the public and that makes their social issues that much worse." – Key Informant

Both key informants and focus group participants acknowledged that individuals may use substances alone; however, they more often described substance use occurring in a group context. Individuals may be in the presence of others who use the same or different substances, and such groups were described as socially isolated

from the broader community. Though using substances alone was viewed by focus group participants as increasing the risk of overdose, several key informants described drug use in groups as equally risky, since everyone is under the influence and no one assumes responsibility in such an environment.

> "When there's so many people using in the same apartment, no one is really responsible. So, they're all taking chances." – Key Informant

PROBLEMATIC SUBSTANCE USE BEHAVIOUR

Reusing, Sharing, and Unsafe Disposal of Drug Supplies

Despite the presence of a local NEP, reusing, sharing, and unsafe disposal of drug supplies still occurs in HPEC. Such behaviours present health risks to the people who use drugs, as well as to the broader community that may be potentially exposed to used drug supplies due to unsafe disposal. Reusing personal supplies or sharing them with others was explained to be due to several factors, including an inconsistent availability of drug supplies within the community; inconvenient hours of operation of existing services; a lack of awareness of existing services; stigma associated with accessing harm reduction services; personal preference for homemade supplies (e.g., pipes); the high cost of pipes; and personal convenience. While some key informants felt that such behaviour reflected a lack of planning on the part of the individual using drugs, focus group participants explained that supplies are reused or shared to satisfy their addiction in the moment.

> "It's probably just convenience basically because they're in the mode to use so, they're just going to use the first thing they see and if it's already there, why not reuse it." – Focus Group Participant

Participants expressed concern regarding the unsafe disposal of drug supplies in both urban and rural HPEC and the potential risk of transmission of blood-borne infections, particularly among children playing in public spaces. They described finding needles in highly frequented parks, school yards, on the street, behind community buildings, and in graveyards.

> "The weekends, Saturdays and Sundays, I would take my son to his school and there'd be bottles and needles all over the place... You'd come there the next day, they'd still be there." – Focus Group Participant

> "...They leave their needles in the parks...or the graveyard. And 90 percent of the time, they'll stuff them into the ground, so that they're hiding but they're still sticking up out of the ground, because there is no place to put them." – Key Informant

Despite expanding the availability of sharps containers, existing needle disposal sites are still not meeting the current needs of the local community.

> "…. Like just finding needles and they find you know whatever on the street and it's like 'Oh there's only two or three places and they can return this stuff' and you know, sometimes it is not working with some people that are going to do that, right?" – Key Informant

Overdose Response and Naloxone

Very few focus group participants reported having first-hand experience responding to an overdose. Nevertheless, more participants felt that they would, or those around them would, respond to an overdose than those who would not. Fear of law enforcement was cited as a potential factor influencing an individual's decision of how to respond when faced with such a situation.

> "Someone would probably phone the ambulance, but everyone would just leave, I think, because they don't want to get caught having their stuff on them. They don't want to be associated with any of that. Nobody wants to help, you know, that means like the cops knowing like, 'Oh all these persons are round here, maybe we'll keep our eye on them.' They don't want any of that heat on them, right...." – Focus Group Participant

A greater number of focus group participants reported that they either carry a naloxone kit on them or have one at home, compared to those who reported that they do not. Several participants explained that they have carried a naloxone kit with them to be able to help others in the event of an overdose; however, the consistency of such behaviour is unknown. Of potential importance to public health is that some participants indicated that, although they have a naloxone kit, they were never trained on how to use it. Among those participants who reported that they do not carry a naloxone kit, several expressed that they would like to do so since learning more about it during the focus group. Focus group participants felt that many people who use drugs do not carry a naloxone kit because they do not perceive themselves to be at risk of an overdose.

> "I think, well, people don't admit they have like a problem, so they just say, 'Well, I know I only do it a couple times a day, it's not going to happen.' You know, they just don't think it'll ever happen to them, so that's why they don't carry one." – Focus Group Participant

Based on experience working with those who use drugs, a key informant suggested that injectable naloxone kits should be made available to respond to this priority population's preference and level of comfort using needles.

> "The other thing that might be interesting for you to know is that a lot of people don't like using the nasal kits because they don't find them as effective... I'm sure that it is, but that's something that I never really thought out right. I thought the naloxone nasal sprays are easier, but the people that are really using, like doing injection type using, are not afraid of needles, like they can give a needle, and the naloxone needle kits I think are quite a bit cheaper than the nasal sprays." – Key Informant

Injectable and nasal spray naloxone are equally fast-acting and effective methods to temporarily reverse the effects of an opioid overdose. In addition to ensuring both naloxone methods are available, it may be necessary to address misconceptions about effectiveness.

IMPACTS OF PROBLEMATIC SUBSTANCE USE

Personal Impacts

Physical Health

Physical health impacts were described by key informants as including infectious disease, unplanned pregnancy, injection site reactions, overdoses, oral disease, and nutritional deficiency. Exposure to and acquisition of infectious disease was noted with high frequency among key informants. Consistent with the disease transmission risks associated with injection drug use, blood-borne infections (e.g., hepatitis C, human immunodeficiency virus [HIV]) were discussed by nearly all key informants. Hepatitis C was described as an "epidemic" among those who use drugs in HPEC and was suggested as a key indicator that individuals are not accessing available harm reduction services and/or are sharing drug supplies.

Unprotected sexual activity was mentioned by several key informants as contributing to sexually transmitted infections (STIs) and unplanned pregnancy among people who use drugs. Key informants stated that unprotected

sexual activity commonly occurs when individuals are impaired and/or through non-consensual sex (i.e., sexual assault).

> "We often have females and sometimes males throwing themselves to get their fix, so not only are they using drugs, but now they are having unprotected sex, so now we've just increased the risk of HIV or hepatitis or all those STIs that come with unprotected sex..." – Key Informant

Injection site reactions, such as cellulitis, abscesses, and nerve damage, are common occurrences and may demonstrate insufficient knowledge regarding safer injection techniques.

> "... They don't have proper knowledge of learning how to inject. Some of them just go and shove needles in their arms and without even drawing blood, they'll just shove it into their muscle or causing cysts or abscesses..." – Key Informant

The majority of key informants cited accidental overdose as a major physical health impact of problematic substance use that has impacts at both the individual- and societal-level and may lead to significant morbidity and mortality in HPEC. Overdoses were described as becoming increasingly common as a result of individuals administering doses that are too high, drug contamination, and/or using drugs alone. One key informant explained that overdoses are particularly likely to occur when drug use has escalated from prescription opioid use to more toxic drugs with uncertain strength and potential contaminants, such as fentanyl or crystal meth. Paradoxically, knowledge of drug contamination or overdoses within the drug-use community may lead to individuals actually seeking the drug responsible for these events.

> ".... Because somebody has overdosed... They'll go and buy it from that person because they think that's a good drug, so people are going to these places where they know people are overdosing because they think, 'Oh, it's really strong; it's really good.'" – Key Informant

Problematic substance use was also described as impacting oral health. Whereas some key informants focused on the side effects of drugs (e.g., dry mouth associated with opioid use), others explained that problematic substance use impacts oral health due to poor hygiene practices, malnutrition, lack of access to oral health care, and financial insecurity.

> "Dental problems are significant. Opiates cause your mouth to be dry. People don't have access to good oral hygiene and like a checkup and stuff like that, so it's a huge cost for our tax payers because if you're on Ontario Works, you're going to need dentures and they're expensive."
> – Key Informant

Mental Health

A strong connection exists between problematic substance use and mental health concerns, with mental health concerns often preceding, and resulting from, problematic substance use. Focus group participants emphasized that the underlying causes of problematic substance use are not being addressed when substances are used as a coping mechanism. This is consistent with the view held by several key informants that the opioid crisis should be reframed as a mental health crisis.

> "[Drugs] don't cure you, they just cover up the problem." – Focus Group Participant

> "And we've, you know, we saw that it was pills at first and they are blaming it on doctors over-prescribing, but then fentanyl came along and carfentanil, which are not normally prescribed and now we see crystal meth becoming a significant problem." – Key Informant

Unaddressed mental illness, combined with the personal and interpersonal losses that occur through neglecting oneself and others, may lead to further deterioration of mental well-being among people who use drugs.

> "They may start off helpful, you know, just like an alcoholic drink would in settling their nerves, but it's difficult for people to make that decision to stay at one drink or one pill and they just take more and more and as the drug builds up tolerance, it loses its effectiveness and then they have to take more of that. As they do that, they create more damage to themselves psychologically and physically." – Key Informant

Safety and Security Risks

Safety and security risks result directly or indirectly from problematic substance use. Sex trade involvement was the most common personal safety and security risk discussed, with sex being exchanged either directly for drugs or for money used to pay for drugs. This was reflected upon as substance use being prioritized over personal health, safety, and well-being.

> "Because they are in such dire need for these drugs, they're willing to do absolutely anything to get it… Unfortunately, they have to prostitute themselves to get the money to afford to feed their addictions which also leads to further health problems." – Key Informant

Problematic substance use has also been associated with victimization, which occurs when a person who uses drugs becomes a victim of a crime. Victimization was described as occurring in the context of obtaining drugs from a dealer and included being robbed, assaulted, subjected to human trafficking, or murdered. Dealers may also intentionally give individuals drugs that are different than what they believe they are purchasing. Due to these potential risks, many who use drugs fear for their safety.

> "They have to deal sometimes with dealers that they don't know. They don't know the reactions the dealers are going to have. They also have a fear of what we call "getting ripped," where they approach a dealer to buy the product and instead of receiving a product, they get robbed and they lose some money and they don't get the product. Then they have to do other things to get more money to go get more …They have a lot of paranoia and…may become victims themselves." – Key Informant

Although mentioned less frequently, other personal safety and security impacts included incarceration, (e.g., due to theft to secure funds for purchasing drugs), and personal injury due to the impairment effects of substances on decision-making capacity.

Self-Neglect

Underlying several of these personal impacts is self-neglect. Both key informants and focus group participants explained that, in the context of problematic substance use, the purchase and consumption of substances is often prioritized over basic needs and activities of daily living (ADL) (e.g., maintenance of personal hygiene, housekeeping, housing security, and the purchase and consumption of food), and health-seeking behaviour (e.g., maintaining medical appointments).

> "I know a lot of people that just don't take care of themselves when they're using. They don't take care of their kids, they take care of nothing. They just want to get high and do what they need to do to get high and that's pretty much it." – Focus Group Participant

> "So, when somebody is addicted, it doesn't matter to what, it's the last thing they think about it. Like that's the first thing they think about in the morning and when things are restricted that

much, it interferes with their ADL or duties of daily living and then it turns them into an individual that doesn't function in the community very well and doesn't function within the family very well..." – Key Informant

This may be conceptualized using Maslow's Hierarchy of Needs, which is a motivational theory of human behaviour suggesting five interdependent levels of human needs. In the context of this model, the need to satisfy drug cravings and prevent withdrawal becomes a significant behavioural motivator at the expense of basic human needs, safety needs, belongingness and love needs, and esteem needs.

"Most people who are addicted to opiates, you know, they spend the majority of their day figuring out when they're going to get opiates, where they're going to get opiates, how are they going to afford the opiates, and then the other thing that they have to worry about is where they're going to eat, where they're going to sleep that night. So, that entire culture of drug abuse takes over any other need to get a job, to spend time with family, to go out with friends, to have a normal productive social life and I guess contribute positively to the community." – Key Informant

Neglecting oneself often will result in neglecting others, including vulnerable dependents.

"Did I see people that I know that have kids that would let their kids starve for five days while they went and got high? I watched it just not even four days ago. I watched a really close person to me spend their last fifty dollars to go smoke crack while their son starved that night and went to bed hungry..." – Focus Group Participant

Interpersonal Impacts

Impacts of problematic substance use extend beyond the individual, with key informants and focus group participants describing negative effects on personal relationships with friends, family, and romantic partners.

Relationships

Key informants stated that problematic substance use creates and exacerbates conflict within relationships. People who use drugs are often focused on meeting immediate physical needs (e.g., housing, food) or determining when and how they can obtain their drug of choice. These needs interfere with their ability to maintain relationships and participate in the community. Involvement of the Children's Aid Society (CAS) was a common outcome of this pattern of behaviour, as described by key informants and focus group participants, with problematic substance use adversely affecting an individual's ability to provide for and parent their children. It was noted that conflict and trauma related to problematic substance use resulted in isolation from social support networks.

"Another common thing I see with my clients is a lack of relationships with family members or there's been some kind of trauma or conflict within the family. So, a lot of my clients that I work with that have addiction are isolated from their support system. So, realistically it's just them and I think that that's often why they continue to use is because they have nothing to do, they have no hope, right." – Key Informant

Focus group participants and key informants emphasized that domestic violence has a significant impact on romantic relationships. Key informants stated that emotional and physical domestic violence was typically rooted in pre-existing trauma and was exacerbated by the effects of problematic substance use. Domestic violence

creates additional trauma and can influence individuals to use substances to cope, creating a cyclical pattern of harm.

> "… Domestic violence is a big problem. And even if it's not physical violence, there's a lot of emotional violence and that kind of trauma and emotional pain that the people are in, it is usually being aided by getting high, you know?" – Key Informant

Societal Impacts

The societal impacts of problematic substance use affect communities and community members who may or may not have a direct relationship with people who use drugs.

Criminal Activity

Key informants explained that criminal activity (e.g., theft, dealing substances) is a means by which individuals obtain money to purchase drugs. Both key informants and focus group participants stated that a break and enter into a car or property is often committed to help individuals find shelter or a place to sleep. The association between drugs and criminal activity was noted as causing society to fear individuals experiencing problematic substance use.

> "I saw time and time again when I would sit down with people. The general public is scared because it is scary to them and they don't understand it, so they're fearful because rightfully so there is a crime element that's associated with drugs…" – Key Informant

Safety of Others

Key informants described the impairment effects of drugs as having potential impacts on the safety of others, including violence resulting from substance-induced paranoia, risk-taking behaviour, and driving under the influence. Key informants expressed that impairment poses risks for service providers and other staff, as well as other tenants in community housing.

Social Determinants of Health

The interaction between problematic substance use and the social determinants of health (SDOH) was found to be a major theme throughout all focus groups and key informant interviews. Housing, income, and food insecurity were the most frequently mentioned SDOH mentioned by both key informants and focus group participants. Key informants provided additional details about the impact that problematic substance use has on an individual's social environment, namely on experiences of social exclusion and early childhood development. This means that problematic substance use impacts many SDOH, thereby increasing an individual's vulnerability to numerous other challenges to health and wellbeing. It is important to note that although challenges relating to the SDOH may precede problematic substance use, problematic substance use may also amplify existing challenges or create new struggles.

Housing

According to the *Canadian Definition of Homelessness*, three types of homelessness exist, including being unsheltered, emergency sheltered, or provisionally-accommodated (45). Unsheltered individuals have an absolute lack of housing, do not access emergency housing, and are staying in places that are not designed or fit for human habitation(45). Focus group participants discussed being unsheltered as one of the impacts of problematic substance use more often than key informants. Several shared their lived experience of being unsheltered and staying in cars, tents, hallways, parks, alleys, or near public buildings (e.g., City Hall).

> "…I thought it would be safer if I slept out on the lawn in front of city hall. Nobody's gonna roll me there in front of City Hall, right? Anywhere. Broke into cars to sleep; got arrested; spent time in jail… It's just not a life." – Focus Group Participant

Key informants also discussed unsheltered homelessness but focused more on the experience of people who use drugs being provisionally-accommodated. Provisionally accommodated individuals are "technically homeless and without permanent shelter, and access accommodation that offers no prospect of permanence" (45). Living without a fixed address, commonly referred to as "couch surfing," was described as occurring following eviction. Unfortunately, without a stable address or proper identification, accessing needed health and social supports is extremely challenging.

> "And people don't, they don't have addresses, so that has been a challenge. A lot of people are homeless in this area and they are living off of whatever they can find, like a lot of people aren't even connected with Ontario Work Disability and then we find now it's because they don't have proper identification. So that's I guess a challenge for our agency." – Key Informant

The lack of emergency shelter was also emphasized by several focus group participants as a major problematic issue in urban HPEC. Emergency shelters are temporary accommodations, provided by government, non-profit and faith-based organizations, or volunteers, for those who are unable to secure permanent housing (45). The absence of longer-term emergency shelters was identified by one key informant as being the catalyst to a chain of events that leads to significant social loss.

> "I have five kids. I was in emergency housing at welfare and they came and literally said to me, 'You gotta go. Thirty days, you've gotta go.' I had nowhere to go with five kids. You're still made to go. And literally they still made me leave even though there wasn't somebody going in there… So, then I left and …my whole family fell apart. I had five kids and a boyfriend. Now I have no kids, and no boyfriend, and no home. Well, I have a two-year-old boy. All within three days my whole life just went downhill. Bang, drop. And you know what they tell you? Good luck." – Focus Group Participant

Lack of Safe and Affordable Housing

In addition to experiences of homelessness, participants discussed a general lack of affordable housing across HPEC. Some key informants suggested that housing is more easily accessible in the urban regions of HPEC (Belleville and Quinte West) compared to rural regions. According to those with lived experience, long wait-times of up to seven years exist for government-subsidized housing, particularly for single individuals. This deficiency makes it very difficult to address / solve the issue of homelessness in HPEC.

> "When 9/11 hit I was told no civilians anymore on the base, so I lost my job. I'm telling you, nothing. I had to go on welfare. I had to basically work somewhere to pay the rent. $900 is a lot to come up with to pay rent when you have a wife and a child, a young child. Try that, and it's not easy and there's nothing, no help. I was on the waiting list before I got my housing after almost seven years." – Focus Group Participant

> "In order to help people who are on drugs, especially if their homes are on the street, you need to put them somewhere." – Focus Group Participant

Among those who are fortunate enough to have secured subsidized or affordable housing, the quality and/or safety of accommodations was described as suboptimal. Safety was a significant concern voiced by both key

informants and focus group participants, who described "low income" housing as improperly maintained and "overrun with drugs." This situation may be exacerbated by high turnover rates among superintendents.

> "And if you live in housing, like I live in housing on [street name removed], it's pathetic…Nothing gets done, okay? So, we're, we are paying cheap rent. We expect … Yeah, nothing gets done… In the last two years we've had, what? Ten? Superintendents that will come, quit, come, quit, then there's nothing there. Doors don't work, people come in at all hours of the night, dogs are crapping all over in front of your door. Nothing gets done about it." – Focus Group Participant

An unsafe housing situation does not promote health or well-being. With so little affordable housing available in HPEC, those with lived experience have often had no other option but to remain in such conditions.

> "Nothing gets done and that's, that's housing for you … But I can't afford, I can't afford to move." – Focus Group Participant

Income, Employment, and Food Insecurity

Connected to many of the other social determinants of health discussed within the context of this project is the experience of financial insecurity and poverty. Although one key informant explained that problematic substance use affects individuals at all socio-economic levels and not only those living on low income, the majority of key informants and focus group participants spoke of the close relationship between problematic substance use and "poverty," "low social economic status," or "income instability." While poverty may precede substance use challenges, further financial challenges often occur because of problematic substance use. The experience of intergenerational poverty was described as limiting access to health-promoting opportunities, which may result in individuals turning to problematic substance use to cope with hardship.

> "So, the opiate issue is a symptom of a greater social problem. So, the greater social problem includes poverty which again is a symptom of people not having access to opportunities that benefit them… families who are existing in a generational cycle of poverty, and the definition of poverty that I use to guide my work is the absence of choice or the limitation of choice, and a lot of folks that grew up here, they don't have a lot of choice. And when you don't have a lot of choice, life feels hard, and one of the choices that you do have is to escape that feeling and one of the ways that people do that is through drugs." – Key Informant

Key informants and focus group participants explained how people who use drugs experience challenges related to finding and maintaining employment. Focus group participants described the obstacles of having a criminal record or being stigmatized by employers due to their past or current problematic substance use. Employment challenges make it difficult for people who use drugs to get out of the cycle of disadvantage, as a lack of employment will often lead to financial, housing, and food insecurity.

> "I am labeled around [location removed] now because, I don't know whether it is drugs, or you know, criminal record, I can't get a job anywhere. It's like, I think where it got started is because I used to work full time, I put in a criminal record check and ever since I am not able to get a job, but people are getting hired all around me and I am like, yeah, we are trying, right, like we are doing this together, right, so that's what we need more of." – Focus Group Participant

Food insecurity was found to be a significant issue among people who use drugs, as many individuals simply do not have enough money to pay for food for themselves and/or their dependents and their substance use. This leads to having to choose between basic human needs and satisfying drug cravings and avoiding physical

withdrawal. Some may make the choice to purchase opioids instead of food, as it may be the less expensive option available to suppress feelings of hunger.

> "[It's] cheaper to do an opioid, which like pushes or represses your hunger, to survive on those, than it is to be able to eat properly." – Focus Group Participant

The high cost of food, particularly in rural communities (e.g., Madoc), contributes significantly to food insecurity. Food programs and food banks do exist in HPEC to respond to such challenges; however, access to these may be limited in rural communities (e.g., Marmora, Stirling), mainly due to transportation barriers. Although emergency food programs provide temporary relief for those experiencing food insecurity, they do not offer the range of food options necessary for optimal nutrition, which increases vulnerability to chronic disease. Individuals accessing food banks may also be considered a priority population for Food Skills classes.

> "Food banks give snacks and non-perishables, but they don't have fruits and vegetables, they don't have meat, and some people wouldn't know what to do with fruits and vegetables in the house anyway." – Key Informant

Social Environment and Social Exclusion

The social environment is a significant determinant of health that is impacted by problematic substance use. For people who use drugs, substance use can become an important part of socializing with others. Substance use may begin in a social or recreational context, particularly among younger demographics, that may escalate over time to become a larger part of their lives. Social connections form with others using similar substances, which may satisfy the basic human need for social connection. This can make it difficult for people who use drugs to see how problematic substance use can negatively impact their social lives.

> "Patients who don't seek treatment, I would think that they do not necessarily see that their drug use affects their social life negatively because I think, you know, in a lot of ways they begin to form their social life around their drug use. So, it becomes a part of their social life. They start hanging out with friends that do the same drugs that they do. It becomes part of something that doesn't necessarily create blockade for them anymore." – Key Informant

When substance use becomes a large part of social life, it is harder to develop or maintain social connections with those who engage in health-promoting behaviours. Without a supportive social environment, changing behaviour can be challenging.

> "You know they kind of are spending time with people who are also using, so that it's hard for them to make connections with people, like healthier connections with people, who are engaging in healthier activities. So, I think that it's just the isolation piece and a lot of guilt and shame for when they can connect with people, not really feeling like they can be honest about what's going on with them." – Key Informant

Furthermore, people who use drugs are at risk of being isolated from their communities, perpetuating experiences of social exclusion (e.g., stigma) and its detrimental consequences on health and wellbeing.

> "Then as far as socializing goes, it keeps them just very isolated in their own little groups, I guess, you know what I mean. There are a couple little houses in Belleville where these people hang out and then they are kind of ostracized from the rest of society because of what they do or where they hang out to do such things, and then sometimes they don't have a place to hang

out, they're doing it on the street which then makes them even, you know, seen worse by the public and that makes probably their social issues that much worse." – Key Informant

Early Childhood Development

Having a parent or caregiver who engages in problematic substance use can negatively affect child development by impacting role modelling, trust, and concepts of normative behaviour (46). These impacts can result in adverse childhood experiences (ACEs), including trauma, mental illness and other risk factors for problematic substance use, establishing conditions favouring an intergenerational cycle of problematic substance use (1). Access to early childhood education plays an integral role in providing a supportive environment for children that fosters healthy growth and development.

> "They have problems raising their kids or their kids can be taken away from them ... It weaves a very nasty, nasty thread through the entire fabric of one's life…Their children see it and their children are damaged by the time they're three or four or five years of age because of the trauma that they've been going through, and then it kind of passes itself on in an arcane type of fashion." – Key Informant

BARRIERS TO ACCESSING SERVICES

In this analysis, barriers are considered factors that restrict the use of a service by making it more difficult for individuals to access, use, or benefit from it. System-, organizational-, service provider-, and individual-level barriers are identified based on what is suggested by key informants and focus group participants or what is the most appropriate way to address the barrier. Together, these levels create a social ecological model of the interplay of factors that affect access to services (Figure 8). The social ecological model is a seminal public health framework that describes the interaction of factors that influence individual health behaviour and outcomes (47) (48). The framework locates the individual as nested within multiple, hierarchal levels of influence and underscores the impact of the environment on health outcomes. Social ecological models are helpful in determining barriers and facilitators to health, identifying interventions at different levels of influence, and highlighting opportunities for comprehensive strategies.

Figure 8. Social ecological model of factors influencing access to services for people who use drugs
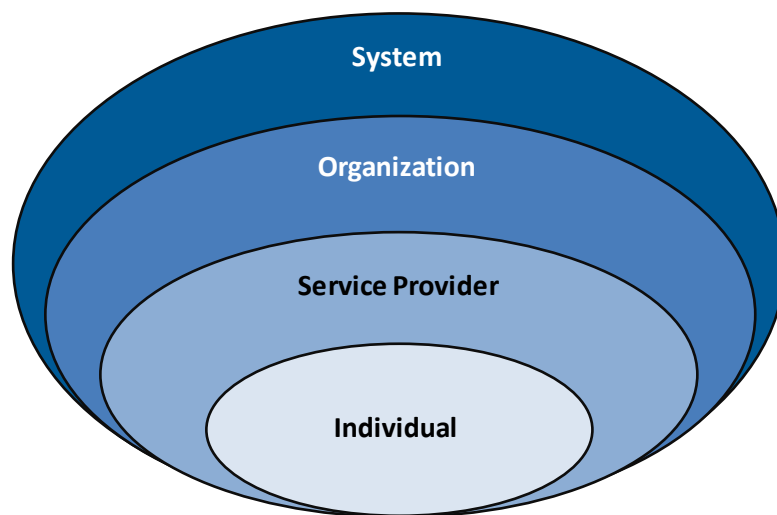
Appendix C provides definitions for each level of this social ecological model. Appendix D provides a visual of where each barrier (identified by key informants and focus group participants) falls within the social ecological model.

System-Level

A system is a group of organizations that work together for a particular purpose or have complementary mandates. Systems are often interconnected (e.g., primary care and harm reduction programs). Systems can also exist outside of organizational boundaries and influence the behaviour of multiple other systems (e.g., governing bodies, social structures, and institutions). System-level barriers can exist within individual organizations, but they can also extend more broadly to larger structures and groups of organizations. Bureaucracy, stigma, criminalization, lack of services, system navigation, and transportation were the most common barriers discussed by key informants and focus group participants.

Bureaucracy

Key informants and focus group participants named several forms of system-level bureaucracy that posed barriers to accessing addiction, mental health, and social services. Bureaucracy at the system-level refers to hierarchical and administrative structures of systems such as governments or sectors of health care that complicate and create additional barriers to accessing services. Individuals in HPEC face challenges attaining a primary care physician. Key informants stated that individuals who do have a primary care physician located in a traditional doctor's office find that the services they can access may be limited in comparison to those available in other locations, such as CHCs. As a result of these restrictions, services may be accessed based on geographical location, rather than intensity of need.

> "It creates a real barrier as far as if you're identifying people who could benefit from services, but they don't. Either they don't have a primary care provider, or they don't have one through the location that I'm working out of, so I just can't really take the relationship any further." – Key Informant

Furthermore, key informants stated that organizations' strict privacy requirements prevent collaboration between services and across geographic regions in HPEC.

> "When I have a client that wants me to help them and I phone in, they won't share or talk to me." – Key Informant

Options for counselling or psychiatrist appointments are limited due to a lack of spaces available. Key informants attributed the lack of spaces to insufficient funding for such resource-intensive services. Focus group participants spoke equally about the allocation of government resources to services. It was a common sentiment among focus group participants that the "government" has a greater focus on large urban centres, despite a potentially higher need in smaller towns and cities.

> "Yeah, and if it wasn't for the military, we'd be a ghost town and the fact is, we're forgotten. We don't get the services that need to be here." – Focus Group Participant

Key informants discussed how systems often have requirements that affect whether individuals can access services. For example, many organizations ask them to provide identification with an address or phone number for correspondence. Key informants expressed concern that when individuals struggle to comply with such conditions they are viewed as non-compliant.

> "One of the biggest problems with the health care systems is that for folks who are hard to serve and are struggling and are outside of the box and outside of societal norms, we expect that if they can understand written words, you know, 'Here you go, here's your pamphlet, here's your this, here's your that,' and because they can understand in the moment and they're not following through, then they're just non-compliant." – Key Informant

Additionally, the process of completing forms for social assistance was described as stigmatizing, as individuals may feel prompted to disclose personal information that will prevent them from being approved for programs, such as the Ontario Disability Support Program (ODSP). "Stigma" refers to negative or unfavourable attitudes (e.g., prejudice) and behaviour (e.g., discrimination) towards people usually because of a personal characteristic or perceived membership in a group (20).

> "The applications are onerous and designed for you to fail. There's a section of the ODSP application where the client is given a section to fill out and it says that you don't have to fill it out if you don't want to, but people fill it out because they think they should, and they hang themselves because they were trying to minimize their problems because they're stigmatized. I feel bad for them because just like that, they're off the list for ODSP." – Key Informant

Another key informant summarized the consequence of the figurative hoops that people who use drugs must jump through to access support:

> "People feel penalized and constantly not able to make the grade because they can't seem to fit in the box." – Key Informant

Stigma

Stigma was one of the most prominent barriers to individuals accessing services and support in HPEC. Key informants and focus group participants perceived negative attitudes or observed stigmatizing behaviour by the public, service employees, and governing bodies, toward people who use drugs. Stigma existing within the general public speaks to how problematic substance use is perceived as an individual problem or a choice, rather than an illness that is influenced by social circumstances. How municipal, provincial, and federal governments respond to problematic substance use was interpreted by focus group participants and key informants as indicating whether decision-makers view problematic substance use as an individual or system-level problem.

> "As far as the general public is concerned, it's something that people should be able to control. Just don't do it." – Key Informant

The lived experience of focus group participants allowed for deeper insight into the pervasiveness of stigma surrounding substance use and its impact on individuals seeking help. Focus group participants described feeling like a separate class in society or like the embodiment of an illness that should be avoided.

> "It puts a mental sickness on the rest of society. They avoid you like the plague…Like it's contagious, like I'm going to catch addiction from you." – Focus Group Participants

Focus group participants acknowledged that stigma is due to ignorance resulting from a lack of experience with problematic substance use. This ignorance is perpetuated by systems that hide and isolate people who use drugs from the rest of society.

> "They got nothing, and at the end of the day, again, the only one that knows a person's story is that person, and for those that say, 'No,' there's a teaching: Walk a mile in a person's moccasins and then let them say whatever they're saying." – Focus Group Participant

Despite understanding that stigma toward people who use drugs is unfair, focus group participants reported strong and long-lasting impacts of stigmatization on their self-esteem. A focus group participant explained that it "hurts" to know public perceptions of people who use drugs and that the lifelong journey of fighting stigma becomes "exhausting." This was described as especially challenging when focus group participants felt that they had been "taking the proper steps" to address their problematic substance use and experienced little room for perceived missteps in this process.

In general, focus group participants and key informants commented that there is a lack of anonymity for individuals when accessing harm reduction services. This experience is heightened in small towns where people feel that they are more likely to be identified if they are seen by the public or by service providers. Anonymity is viewed as important because it protects people who use drugs from directly experiencing stigma. The possibility of being identified and judged negatively for using harm reduction services heightens an individual's sense of vulnerability.

> "Admitting, saying, 'I'm actively and currently using,' and how vulnerable that makes me, especially in this small community – There is no anonymity here. When you walk through those doors, everybody knows." – Focus Group Participant

Individuals who have not disclosed their problematic substance use to friends, family, or their employer, perceive that accessing harm reduction services comes with "a high degree of risk" to their personal life. The lack of anonymity in harm reduction services dissuades individuals from using these services or learning about other supports, which in turn raises risks of experiencing harms related to problematic substance use. It is also evident that stigma from the public contributes to an individual's feelings of self-stigma, where public attitudes are internalized, and individuals apply stereotypes to themselves.

> "I will tell you the reason why people don't use it [NEP]… You have to walk through those doors in front of everybody. And then you carry out that brown bag. And you're ashamed and you have guilt and you have shame. There's no anonymity in it. You continue to do it and there is no anonymity and so there's a whole load of issues with that, right? So, there's very few people who use needles that come to get the clean needles. Because of the stigma." – Focus Group Participant

Criminalization

Criminalization makes the personal use, possession, production, and sale of certain drugs illegal (5). Laws imply that certain behaviour is socially unacceptable and deserving of punishment. Focus group participants and key informants spoke to how criminalization contributes to stigma by promoting negative beliefs and stereotypes about people who use drugs. While it is not named in criminal justice, stigma is used to discourage and marginalize unhealthy behaviours such as problematic substance use (49). In a cyclical fashion, processes and institutions that serve to control substance use ultimately perpetuate it by marginalizing people who use drugs (49). Key informants and focus group participants both described how criminal records are a significant hurdle to employment, even when an individual is no longer using illicit substances. A criminal record can prevent individuals from exiting poverty and improving their quality of life. A key informant stated how criminalization interferes with individuals accessing appropriate services, either by involving them in the criminal justice system or by making people fearful of seeking help.

> "So, instead of giving the help they need, the trauma-informed care, and the therapy, and everything that they need, they're criminalized as opposed to getting help." – Key Informant

Focus group participants spoke specifically about having negative interactions with law enforcement and how this might impact their decision to call emergency services for a suspected overdose. The Good Samaritan Law provides an exemption from charges of simple possession of a controlled substance as well as from charges concerning a pre-trial release, probation order, conditional sentence or parole violations related to simple possession for people who call 911 for themselves or another individual suffering an overdose, as well as anyone who is at the scene when emergency help arrives (7).

Some focus group participants felt that their experiences or the experiences of their peers conflicted with the Good Samaritan Law and resulted in reluctance to call emergency services in the event of an overdose.

> "I know that there is supposed to be some, you know, 'Good Samaritan Law' that says, you know, if you call the police they are not going treat it as a drug scene, but that's not the experience that I hear from the public." – Focus Group Participant

It is important to acknowledge that a history of negative interactions with law enforcement can continue to influence relationships in the present day. Removing stigma and improving relationships is a long-term commitment.

> "I think it's going to take time. A lot of these people are old school and they think anytime a cop comes around, anytime a professional comes around, they're going to get in trouble or they're going to be, probably, talked down to." – Focus Group Participant

Lack of Services

Key informants and focus group participants described a lack of services across various sectors. This is a system-level issue because it permeates the boundaries of any individual organization and is strongly related to available funding and government priorities. HPEC was referred to as "resource poor" in terms of its addiction and mental health services, with many services located in more urban centres like Belleville or Kingston. Focus group participants explained that it is necessary to travel to access detox and in-patient treatment and that there are inadequate supports when they return home. Additionally, a lack of a local detox centre can prevent individuals from trying to abstain from substance use because they are unable to manage withdrawal symptoms without medical care.

Key informants stressed the need for counselling that focuses specifically on addiction, as well as increased availability of out-patient counselling. Among those individuals who do receive mental health counselling, both key informants and focus group participants stated that it is not enough (e.g., too short or too few sessions) to adequately address their needs.

> "Once a month is not enough for someone who is an addict. You need someone that will constantly be there for the support to keep you clean or what not. So, if you only see them once a month, how much support are they really giving?" – Focus Group Participant

> "And they are only giving an hour session. You might be lucky if you get half an hour in there."
> – Focus Group Participant

Access to specialist services, such as a psychiatrist appointment, often relies on referral from a primary care physician. Those without a primary care physician also face the barrier of accessing prescription medication to

treat mental health conditions. The consensus between focus group participants and key informants was that a system-level lack of primary care and mental health and addictions services leaves individuals to find other ways to cope with trauma, mental illness, and life circumstances and contributes to feelings of hopelessness.

Focus group participants stated that safe consumption sites and drug testing services are absent in HPEC. Municipally, key informants mentioned that there is an insufficient number of sharps containers and disposal sites for used needles and supplies. Key informants and focus group participants detailed the significant impact of the lack of a methadone clinic in Trenton. Belleville and Quinte West are two of five Ontario cities that have introduced or amended by-laws to distinguish methadone clinics from other medical services and as entities with distinct land use planning impacts (50). These amendments allow municipalities to decide when and where methadone clinics can open (50). In 2012, Chief Commissioner of the Ontario Human Rights Commission wrote a letter to the City of Belleville to voice significant concerns about the proposed amendments to the city's zoning by-laws. By-laws that discriminate against individuals who are trying to access methadone contravene the Ontario Human Rights Code, which protects people with addictions (51). The absence of a methadone clinic in Trenton has meant that many people must find transportation to Belleville or Peterborough for their doses, which is a significant barrier to accessing treatment.

System Navigation

System navigation was a reoccurring challenge discussed by focus group participants and key informants. System navigation refers to an individual's ability to identify and access one service or a network of services that adequately and appropriately addresses their needs. A lack of coordination and/or integration of services creates fragmentation within a system's network of services, which results in organizational silos and inefficiencies for patients and staff. Fragmentation of services occurs when there are barriers that prevent individuals from being aware of existing services and when staff are unable to make effective referrals because they are not aware of the range of services offered by other organizations. Focus group participants described being unaware of several local services, including the NEP. Key informants from smaller organizations specifically mentioned that they felt larger organizations had difficulties understanding their services. It was also mentioned that it is challenging for service providers to find information for clients about services outside of their organization and that this information is not always up-to-date. Disconnection between services increases when services are offered through multiple organizations and across multiple sites. One key informant explained how simplifying this network would increase the number of individuals accessing local services due to increased awareness of services and reduced barriers.

> "If I brought a canteen here and set it up in the middle of this community with a nurse practitioner, methadone doctor, counselors or whatever, just for people to come, people told me that they would be overrun with the people that are wanting services but don't know how to get it, or the barriers are just too much, but they cannot navigate them." – Key Informant

Key informants described some of the impacts of fragmented services, including re-traumatization and isolation.

> "When the services are so fragmented, it's hard for people who don't trust and who have histories of trauma to just keep walking in the door telling their story and to trust that the person behind the counter or on the other end of the phone is going to help them, it's not their experience." – Key Informant

> "There's a bunch of people who are using, who don't know that there's an infrastructure around here to help them and they're surprised to find out that there is quite a bit more than they would have ever thought, and they think that they're using and think that they're the only

person in the world caught up in this disease [hepatitis C]. And I want them to feel that, you know, they're not alone and we're here." – Key Informant

When a system is already fragmented, key informants emphasized the importance of individuals having support to navigate available services.

Rurality and Transportation

Rural geographies and lack of transportation are barriers that affect an individual's physical navigation of services. Individuals struggle with accessing transportation to services within their own municipality, as well as those located in urban centres. Additional travel is required when services are not co-located within one site. Travelling between sites or across long distances is also time-consuming and creates barriers to maintaining employment. Owning a car, paying for gas, using the bus system, or paying for a taxi service are all costly to individuals.

"It's like people drive to Belleville and back and you're into 70 to 80 dollars to drive to get the methadone, doesn't make sense financially." – Focus Group Participant

Key informants noted that Ontario Works programs and Ontario Disability Support Programs can provide financial assistance for travel, but this might not be enough for ongoing appointments. Volunteer drivers are only an option if there is availability on a given day. A key informant explained that transportation is of particular concern to individuals in Trenton who must regularly travel to Belleville for methadone treatment. To achieve stability on methadone and be prescribed methadone take home doses or *carries*, individuals must have consistent transportation.

"They can't get nice and stable until they have rides everyday, and you got to be lucky to have someone in your life that loves you enough to drive you, that has the means to drive you everyday or you have to walk, and I think that's a huge barrier really to stability in a small town." – Key Informant

Organizational-Level

Organizational-level barriers and solutions are those that can be addressed by specific organizations such as HPEPH, OATC, or pharmacies. Bureaucracy, stigma associated with accessing services, lack of access to integrated mental health and addiction programming, lack of access to harm reduction services, and existing public awareness approaches were the most common barriers discussed by key informants and focus group participants. Alignment was found between focus group participants' and key informants' perspectives in terms of these barriers, which strengthens the findings.

Bureaucracy

Organizational bureaucracy was identified as posing significant challenges for people who use drugs to access treatment and harm reduction services in HPEC. In this context, bureaucracy refers to organizational policies and procedures that are rigid, thereby limiting the ability of organizations to be flexible to effectively meet clients' needs. Tremendous discussion occurred regarding the ***methadone clinics*** operating within HPEC and how their organizational policies create barriers to both access and potential success in the program. Frustration was expressed by focus group participants with respect to their lack of participation in their own care plan and subsequent feelings of loss of control. Tight policies and procedures governing access to methadone are regulatory requirements; however, the way they are implemented was described as fueling considerable stress and anxiety among those receiving treatment.

> "So, they know themselves, if there's a glitch in the system and that happens, they know themselves that they might take other resources to get their opiates. So, the system that they've set up, yes, it's a tight system, but it's a very faulty system because you can see the reaction from their clients, and some of the things they've pulled… Just talking about this has already made me nervous – my hands are shaking." – Focus Group Participant

Requirements to attend daily appointments at the methadone clinic were described as particularly challenging when the clinic is only open during regular business hours. Unaccommodating hours of operation, combined with long wait times, make it extremely difficult for clients who are employed in nine-to-five positions to attend appointments and maintain compliance with treatment.

> "Well, they could stop asking people at the methadone clinic to pee every day and chaining them and I don't think you should have to go there every day, how do you work and live your life when you have to go there every single day." – Focus Group Participant

Methadone clinic processes, such as the need to provide a urine sample at every appointment, take direct-observed therapy, and wait in long lineups, fuel the perception among clients that the clinic's primary interest is to generate revenue. This perception likely persists for several reasons related to how OATCs operate. OATCs are part of Canadian Addiction and Treatment Centres (CATC). Although physicians working in OATCs bill OHIP the same way as primary care physicians, CATC is owned by a private company based in the United States (52). Clients may interpret the large volume of clients accessing local OATC services, the lengthy duration of methadone treatment, and the frequent, required urine screens, as means to increase physician profit while also covering CATC overhead fees.

> "I've had people that access the clinic say, 'They don't care, 'I'm just a cash cow. You know, every time I go in, somebody gets paid. They don't care if I ever come off. They want me on it.'" – Key Informant

These negative reactions are compounded by the fact that many OATCs do not meet the standard of care for methadone treatment due to a lack of mental health services. Mental health services may improve relationship-building and trust between clients and care providers and help to change negative perceptions.

This perception likely stems from the fact that many methadone clinics, such as OATCs, are privately-funded health services. Strict program requirements were perceived by key informants and focus group participants to be dehumanizing, which inadvertently affects treatment compliance and increases the likelihood of relapse.

> "However, it is very difficult to comply with and certainly humiliating enough that you have to show your genitals, male and female, when you urinate… And at that point if you can continue having clean urine, then you can get carries on a monthly basis, and eventually after about 6 to 7 months, you can have full carries which is that you just come in to pee once a week and carry. That takes a long time to get there and it is exasperating for particularly those who are young and so they go on and off the program until there's a bigger commitment." – Key Informant

Key informants and focus group participants also spoke of how the organizational mandate and policies of *mental health and addictions counselling services* may present barriers. Registered care providers must practise in accordance with their professional regulatory body and within the mandate of their employer. Organizational mandates may work to constrain the scope of practice such that care providers may not be permitted to provide the holistic care that is authorized by their college. This means that clients may need to seek required care from yet another agency.

> "So, it says here, if we don't diagnose, we don't medicate. So, we're strictly solution focus-based counselling. So, if any of my clients need more of a kind of a clinic approach, I'd often refer to Addictions and Mental Health. I also don't do a whole lot of addictions counseling. I mean I have training in it, but that is kind of off limits for my agency, so again, I do a lot of referrals to Addictions and Mental Health Services." – Key Informant

Organizational policies denying access to mental health counselling services when "under the influence" also present barriers to many individuals experiencing addiction. Granted that such a policy may be in place to protect staff safety, it is important to acknowledge that this may limit many individuals' from having access to counselling. Focus group participants described their experiences of being denied service when under the influence and explained that this was the only way for them to build up the confidence necessary to seek care.

> "Mental health services - don't go in there under the influence because they turn you away. 'We can't talk to you while you are high.' Are you kidding me? Now is the time when they need to move, now is the time. When I am most vulnerable, I don't talk…this allows me to do that, because otherwise I am so full of anxiety…" – Focus Group Participant

Agencies involved in the distribution of harm reduction supplies (e.g., HPEPH, local pharmacies, OATC) also have policies that may have the unintended effect of limiting access when individuals need them. Hours of operation resurfaced as a major barrier to accessing clean needles. Half-day clinics, operating during regular business hours, and offering clinics on only a couple days of the week, do not meet the needs of individuals accessing harm reduction services.

> "…Needle access is another one…They open at 8 in the morning, but they close at 4 in the afternoon. Actually, on Sundays they close at lunch time. So, with that being said, at lunch time a lot of these guys are just getting up or just starting their day, so that's when they get out at noon time." – Key Informant

Organizational procedures for dispensing needles at pharmacies were also highlighted as a barrier. Individuals described having to "jump through hoops" to access clean needles, such as being asked to respond to personally-identifying questions in a public setting. Such an approach is stigmatizing to the individual and may mean that they will refuse to return to use the service in the future.

> "… If they want to do their drugs, then they'll go in with their head down, ask for small bag of needles…They want your age, your name, you know, whereas every harm reduction program that I've ever gone into it's in the back room, help yourself, you grab it, you leave no name, no nothing, you know? Whereas [pharmacy name removed] is asking all these questions, so a lot of them don't use it and a lot of them would sooner shoot up with a straw than go and ask them." – Key Informant

Stigma

Stigma was described as a major barrier when accessing harm reduction, treatment, or counselling services in HPEC. Smaller communities, where "everyone knows everyone," make it extremely difficult to maintain anonymity when accessing services. The downtown location of the *methadone clinic* in Belleville was described as perpetuating stigma, as the highly visible, long lineups outside of the building made individuals subject to public scrutiny and stigma.

"So, in Belleville for instance, the streets are really narrow downtown and Front Street because they were built in the, you know, 1700s early 1800s. You can throw a rock across, you can have a conversation across the street and the methadone clinic was built in the middle facing street, right downtown and everybody knows everybody... People would come to the Freedom Centre and say 'No, I'm not going to go to the methadone clinic because I know I will run into somebody that I see on the street,' and there's only one reason you go into that building." – Key Informant

In June 2019, Belleville city council approved rezoning of 125 South Church Street for operation of a methadone clinic, allowing the OATC on Front Street to move to this location (53). The Church Street address has been described as a more "appropriate" location for the methadone clinic because it has more space to upgrade facilities, there is room for additional parking, and it resides near the main transportation route on Dundas Street (54). Moving the clinic from Front street was also explained as a way to ensure that Downtown Belleville is occupied by the "type" of spaces that will attract people to the area, such as restaurants, shops, and studios (54). The Front Street OATC was cited as a reason why people said they did not spend time downtown (54).

The process of rezoning 125 Church Street to allow for a methadone clinic opened the topic to public feedback and some residents (e.g., owners of businesses near the proposed methadone clinic location) voiced concerns about the move (55). Individuals spoke about concerns that the methadone clinic would bring crime to the area and potentially create negative experiences for customers (56). The Ontario Human Rights Commission states that when methadone dispensaries and Opioid Substitution Therapy Clinics are regulated differently than standard clinics and pharmacies, it encourages municipalities to "make sure that public meetings and discussions do not discriminate or subject *Code*-protected groups to unwarranted scrutiny or personal attack," including stereotypes about people who use drugs, "such as their being undesirable, prone to criminal behaviour, or not part of the community" (51). Although a municipal councillor addressed the biased commentary of some attendees, these views were widely published on local news sites and shared through social media (56). The need to specifically zone for opioid substitution treatment unfortunately provides a forum for stigmatizing attitudes to reach people who have problematic substance use issues and implies some acceptability of these views.

Organizational names also contribute to the stigma that individuals face when accessing services in a small community. Focus group participants explained how stigmatizing it can be to be recognized by people they know when accessing care at Addictions and Mental Health Services or the OATC, simply due to the organizations' signage.

"I know some people that like go down there for mental health, they don't like to go in there because it also says like Addictions and Mental Health. They don't want people to think that, you know, it's a small town, if Susie saw Johnny go in there then 'Oh my gosh like maybe he has an addiction' and people don't want that when they're just getting mental health help or something like that, maybe it's too much in one." – Focus Group Participant

As touched upon in the section on bureaucracy, many focus group participants also described experiencing stigma when accessing the needle exchange program at certain pharmacy locations. Stigma was evidenced by the poor treatment that they described receiving from one pharmacy's staff and in organizational policies and procedures that do not foster anonymity. This may perpetuate additional stress and anxiety in an already vulnerable population. Stigma may present a barrier that is so impactful that it prevents individuals from accessing the program altogether.

Lack of Access to Harm Reduction Supplies

A lack of harm reduction supplies is a major barrier to engaging in harm reduction behaviours. Key informants and focus group participants focused their discussion on the lack of sharps containers and harm reduction supplies in relation to this barrier. With HPEPH being largely responsible for the coordination and distribution of harm reduction supplies in HPEC, barriers identified by participants relating to a lack of access to harm reduction supplies can be best addressed by HPEPH.

Existing safe disposal sites for harm reduction supplies in HPEC are not meeting the needs of the community. The number of sharps containers located in HPEC were described by key informants and focus group participants as insufficient and are "not located where they need to be." Participants suggested placing additional sharps containers in locations where drug use is prevalent and in locations where harm reduction supplies are often found unsafely discarded (e.g., parks). Focus group participants expressed additional concerns regarding the maintenance of existing sharps containers, which were described as often overfilled with used needles.

> "Like they've got them on the walking trail and yet nobody changes them. They get right stuffed full." – Focus Group Participant

Access to harm reduction supplies through services, such as the NEP, was described as "limited" by participants representing both urban and rural HPEC. Several focus group participants mentioned they were aware that clean needles could be purchased through pharmacies; however, the cost of these needles can be a potential barrier.

> "You cannot go to [pharmacy name removed] and get free… needles. You have to pay for them and it's ten dollars." – Focus Group Participant

Participants also identified a local community need to expand access to a wider array of harm reduction supplies, including pipes, for safer inhalation. HPEPH began distributing safer inhalation supplies in May of 2019. The immense need for safer inhalation supplies was identified before the completion of this report, as HPEPH became aware that smoking crystal meth was becoming a significant concern in smaller communities. It was also identified that HPEPH had been one of only two public health units in Ontario that were not providing safer inhalation supplies. The supplies include kits for both crystal meth and crack smoking, with pipes, filters, alcohol swabs, and plastic mouth pieces. These supplies are now available for all NEP sites that choose to dispense safer inhalation kits.

Awareness of HPEPH Harm Reduction Programs

HPEPH is largely responsible for the local NEP and naloxone kit distribution. Many focus group participants demonstrated a lack of awareness regarding locally available harm reduction services. This included awareness of what naloxone is, how to obtain a naloxone kit, and where to access free harm reduction supplies, such as clean needles. A lack of awareness of the NEP program was described by key informants to be particularly common in those not attending methadone clinics, as most individuals learned about the NEP at a methadone clinic.

Although communication of public warnings of local drug contamination (e.g., with fentanyl or carfentanil) or increased rates of confirmed overdoses are intended to raise public awareness, it may be associated with unintended negative consequences. One key informant stated that once individuals become aware of an overdose, it may actually increase their drug-seeking behaviour in order to obtain the substance responsible. Since such warnings are communicated by *HPEPH*, this is an important consequence to consider when planning public communication strategies for local drug contamination or overdose.

> "... Because somebody has overdosed, and then they'll go and buy it from that person because they think that's a good drug, so people are going to these places where they know people are overdosing because they think 'Oh it's really strong, it's really good.'" – Key Informant

Lack of Integration of Mental Health and Opioid Agonist Therapy Programming

A lack of integrated mental health and OAT programming is a barrier to treatment success. Although OAT is available in HPEC in the form of methadone or suboxone, several key informants expressed concern that existing programs lack the comprehensiveness required for long-term treatment success. Key informants spoke specifically about methadone clinics regarding this limitation. Although helpful, local OAT programs were described by participants as not reflecting best practices in that they do not offer sufficient mental health and addiction counselling alongside treatment. Psychological issues frequently underlie problematic substance use; programs that do not incorporate mental health and addiction programing fail to address the root causes of problematic substance use. This makes tapering off OATs challenging and is associated with a higher likelihood of relapse.

> "I have a bit of a problem sometimes with the methadone programs in that they vary in terms of the degree of support they give folks, but some of them, it feels, I know clients describe to me that it feels like an assembly line and they're not getting counseling, and they are not getting case management, and it's not really a well-rounded approach to care..." – Key Informant

To address some of these challenges, the new Opioid Management Program was established in 2018 by the Belleville and Quinte West Community Health Centre (BQWCHC). This multidisciplinary program integrates counselling, transitional case management, psychotherapy, and peer support, along with opioid agonist therapy (e.g., suboxone). Although this is a promising step in the right direction, it was acknowledged by key informants to be one of the only programs of its kind in HPEC. At the time of publication, Marmora is the only other community that has a Rapid Access Addiction Medicine (RAAM) clinic that provides treatment for any substance use disorder along with brief counselling, on-site. Trenton had a RAAM clinic that was initiated in 2018 but closed in August 2019.

Service Provider-Level

Stigma and Negative Experiences

Barriers to accessing care can be unintentionally created by service providers who are there to help individuals reduce substance-related harms and provide access to support, counselling, and/or treatment for problematic substance use and substance use disorders. Service providers include health care professionals who, through their regulatory college, have a duty of care (e.g., physicians, nurses, social workers and pharmacists). Participants in all focus groups described compelling personal experiences where they felt unsupported by health care professionals when accessing health care in HPEC. They attributed this to experiences of stigma or their care provider's seeming lack of sufficient knowledge of harm reduction or addiction to provide them with appropriate care.

Focus group participants specifically mentioned experiencing stigma when accessing emergency hospital care, primary care, and pharmaceuticals. They described being treated poorly, feeling inferior to their care providers, experiencing judgment for their problematic substance use, and feeling that they were blamed by health care professionals for their current life circumstances. This was described by focus group participants as reflecting a lack of sympathy or compassion on behalf of care providers, which leaves people who use drugs feeling rejected and "less than human."

> "That's the major, that's the major barrier. They sit there and they [say] on the news. 'Oh well, we got drug addicts here, here, here, here and nobody's willing to, or nobody wants to help themselves...' How can we help ourselves when we go to help ourselves and we get rejected, get told to get out and not return, and if we return we get arrested?" – Focus Group Participant

Focus group participants acknowledged that they understand there are protocols that health care professionals need to follow, but they feel judged in the way these are implemented. Individuals experiencing problematic substance use expressed the feeling that they are treated differently by health care professionals in comparison to those who are not identified as having substance use issues, which impacts the quality of care that is received. When seeking care at a local hospital, several focus group participants described that their chief complaint was not addressed once the care provider became aware of their history of problematic substance use or methadone treatment. This was most often described as occurring when seeking care for an injury or infection that was associated with pain. They felt that they were automatically perceived to be "drug seeking," when they were really seeking health care.

> "I went to my doctor and my knuckle was broken, and I would not go to the hospital because as soon as you go into the emergency and they see the medication you are on, they glaze over. You just want more drugs. It doesn't matter what you say to them or how hard you are trying, they've already judged you." – Focus Group Participant

Experiences of stigma were not described as exclusive to the hospital setting. Stigma from primary care providers greatly impacts the establishment and maintenance of a trusting client-caregiver relationship. Key informants explained that individuals are often reluctant to disclose their problematic substance use to their family physician due to fear of stigma, even if they have already sought treatment. When they do feel comfortable enough to disclose problematic substance use, focus group participants explained that they often do not feel listened to by primary care providers. Concern was voiced that the underlying mental health causes of problematic substance use and substance use disorders are not being adequately addressed, which may result in long-term consequences.

> "I've been dealing with addiction since I was 14... So, for twenty-three years... I've tried meditation, I've tried yoga, I've tried mindfulness, and you can do all those things... A lot of the time. But if you have anxiety or depression and get to a certain point, there's a breaking point where none of those things work. So, my doctor asked me, 'What makes you happy? Do that.' Well, if I'm having a panic attack, do you think I'm going to get up and cook? No, I feel like killing myself. So, I had to go to the doctor recently and be totally honest with her and say look I'm getting this from the street, I'm going to continue to get it from the street unless you help me. So, I told her, I said you need to try to trust me and we need to work together... I believe in harm reduction, you need to help me, we can work together... I can come to you and we can talk about this, but you need to make time for me. You need to listen to me." – Focus Group Participant

Lack of Knowledge

A lack of knowledge about problematic substance use among health care providers may contribute to the service-provider barriers that focus group participants reported experiencing. Although newer care providers were described as having greater familiarity with the principles of harm reduction, focus group participants discussed feeling the need to educate their care providers on substance use disorders and opioid-agonist therapy due to their lack of knowledge on these topics. They stated it was challenging to explain their issues with problematic substance use to a service provider who lacked "lived experience" of the issue. They described feeling as though

their service providers did not know the answers to their questions and were unable to understand or relate to them.

> "... There is nothing worse than being a person who lives with addictions, sitting there, talking to a drug counsellor or an addictions counsellor, and they have no clue what you're talking about. But they're nodding their head because they are going to help you... You ask them questions and they don't have the answer. The help that is needed is from the folks that have the experience. You have to put somebody in that chair." – Focus Group Participant

Distrust of service providers, particularly those working within methadone clinics, was also evidenced during focus group discussions. Several focus group participants questioned the motivations behind physicians involved in the treatment of addictions and in prescribing methadone/suboxone, feeling that the physicians had a financial incentive to do so. This was described as making those struggling from problematic substance use feel like a "cash cow" or "walking pay cheque."

> "We're their income and then we make a mistake and they, they get pissed off at us because they're not getting their bonuses, they're not getting that little bit of money put into their account. And they get mad at that because they're not getting that incentive. Where's our incentive? We're not getting an incentive for going on the methadone program. Where's our incentive? We don't get an incentive. What's our incentive? Oh, you [voided] clean nine hundred times, here, you've earned a carry." – Focus Group Participant

Individual-Level

The Health Belief Model

The Health Belief Model (HBM), a widely used social-cognitive theory of health behaviour change, contains several concepts that predict whether an individual will engage in health protecting and/or promoting activities (57). These concepts include perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy (57). Individuals are more likely to act if they perceive themselves to be susceptible to health issues, and they think that their behaviour will lead to adverse health consequences, that available resources would help them in reducing either susceptibility or severity of the consequences, and that the benefits of taking action outweigh the potential risks. Through analysis, several of the HBM concepts were identified during key informant and focus group participants' discussions of individual-level barriers.

Cues to action, such as service promotion or communication activities, occur within an individual's external environment and are thought to trigger behaviour change. Availability or awareness of local services does not equate to behaviour change unless one is ready and able to do so. Readiness takes time to develop and is essential for successful behaviour change to occur, whether it relates to engaging in harm reduction activities, treatment, or accessing supportive health services. Readiness is also closely connected to an individual's perception of risk or severity, as individuals who do not perceive themselves to be at risk for adverse health consequences, such as overdose or communicable disease, may not be motivated to change. Furthermore, for change to occur, an individual must first recognize that they have been engaging in problematic substance use.

> "There are a lot of people who came at it from the opposite side and find themselves with a dependency and can't even come to terms with the fact that they have a dependency. Won't buy into a physician saying you have an issue, 'No, I have a pain issue,' and that's a really hard nut to crack because people with a good job, a good life, like never a problem and find themselves now... Life is just falling apart around them and they can't figure it out and can't get off this drug." – Key Informant

Closely related to readiness is an individual's perception of susceptibility. This represents their estimation of the likelihood that they will experience negative consequences as a result of problematic substance use. Weighing the potential risks associated with problematic substance use against perceived benefits is a process that occurs in the moment an individual decides to use a substance. Despite promoting awareness of the potential risks associated with problematic substance use, several key informants shared that many of their clients continue to downplay these risks, as "they do not perceive that it will happen to them." Other key informants explained that those misusing opioids will often do anything to avoid experiencing emotional and physical withdrawal, even if that means putting their health, well-being, or safety in jeopardy. Avoiding withdrawal becomes the priority, frequently at the expense of other basic needs.

> "… Those that kind of get hooked [on opioids] are the ones that have significant emotional trauma early on in their life and they find that the chemical comfort really soothes that angst and anxiety that they've had for a very long period of time… Once they try to go off of it, there's two things. There is the emotional withdrawal from satisfaction and the return of a feeling of abandonment, loss, neglect and overall pain and anxiety, and of course the physical symptomatology which is pretty devastating." – Key Informant

Key informants explained that self-esteem may influence readiness, as individuals may not be prioritizing self-care due to their problematic substance use; therefore, they are not able to take positive steps towards improving their health. A lack of self-efficacy, or one's belief in one's ability to take action, was evident in that individuals may be aware of the potential health and social risks associated with problematic substance use, but they do not have the internal and external resources to reduce the risks. This perceived lack of control over the consequences of substance use can contribute to the shame, guilt, and self-stigma experienced by people who use drugs. These are significant individual-level barriers that may lead individuals to become "closet junkies" due to their need to hide their problematic substance use from others, including social support networks and care providers. Without disclosure, it is very difficult for service providers to help.

> "Yeah, it's very hush hush like anyone that does use even if it's as simple as marijuana, it's not very open and like something we all flaunt about it or, you know, like it's not a very open conversation, it's just do your own thing and it's kept that way, because that's the way to cope with maybe not having the outlet to get the help." – Focus Group Participant

Due to the range of dependency that people who use drugs experience and levels of readiness, service providers need to meet people who use drugs "where they are at." For example, readiness may not yet exist to work on certain challenges (e.g., problematic substance use), but it may exist for others (e.g., assistance for housing or food insecurity). They may not be ready for a referral to addictions/recovery services, but they might welcome safer injection supplies. Key informants described the inability to connect individuals with needed services when they were ready for them as a major barrier. Ideally, the addiction and mental health system should be flexible enough to meet clients where they are at and respond with appropriate assistance.

> "And I would say just where they are in the stage of change is the challenge for me because you know you meet someone who is struggling where they are at. As I say, they might not be very outright, so you just have to be really mindful and slow down and work at their pace."
> – Key Informant

Individual behaviour change models, such as the HBM, can be helpful to understanding the social-cognitive processes underlying the decision to take action; however, a major limitation is that they do not adequately consider the social and environmental context affecting behaviour change. Health behaviour is largely determined

by factors that may be outside of the control of the individual, and therefore, upstream strategies must be taken into consideration when developing comprehensive approaches to overcoming individual-level barriers to engaging in supportive health behaviours.

SOLUTIONS

Solutions are actions that are implemented to increase access and reduce barriers to services that address problematic substance use. Like barriers to accessing services, system-, organizational-, service provider-, and individual-level solutions collectively form a social ecological model of interventions (Appendix E). Solutions have been categorized based on who/what (system, organization, service provider, or individual) has been suggested by key informants and focus group participants, or who/what is most appropriate according to professional roles, organizational mandates, and the jurisdictions of various systems. The solutions presented here do not address all the barriers discussed by key informants and focus group participants; rather, they represent specific ideas or ways forward that are actionable.

System-Level Solutions

Guiding Principles

Guiding principles are broad philosophies and values that encompass solutions. These principles can provide a framework for decision-making across all related organizations (Table 5).

Key informants and focus group participants discussed ways that health, addictions, and mental health systems could be more **client-centred** to better meet the needs of people who use drugs. Traditionally, these systems have expected

Table 5. Guiding Principles for Systems

- Client-centred
- Involve people with lived experience
- Trauma-informed care

people to fit with routines and practices that are deemed most appropriate by those delivering services. When individuals struggle to meet these expectations, they face barriers to accessing support. Client- or person-centred systems must be flexible to meet people's needs in a manner that is best for them. A client-centred system strives to meet people where they are at rather than penalizing them for failing to be where others think they should be.

> "I think we should recognize that we need to do a better job of bending the system versus expecting people to adapt to the system." – Key Informant

A client-centred system also recognizes that problematic substance use and recovery do not occur on a straight line. An abundance of rules can create a one-size-fits all model of care that stigmatizes those who are not following a linear trajectory to a pre-determined goal of abstinence from substance use.

> "It's a low-rules type of environment where it's flexible, at least in the short-term, to try and help people get on track and managing to navigate services. Because you don't just automatically go from white to black, there's just so much grey between…That's not to say you throw all the rules out the window and bad behaviour is okay, but there's more tolerance for 'outside of the box' than there probably is in the mainstream all medical model type system."
> – Key Informant

Harm reduction is inherently client-centred because it is driven by the needs and the goals of the individual. Health, substance use, and mental health services can adopt a client-centred approach by respecting client autonomy and self-determination and by engaging clients in decision-making about their care. Client-centred care might also consider whether available services reflect community needs. For example, focus group participants

noted several modifications to existing services that could help to fill gaps, such as male and female-specific support groups, interventions that address different types of drugs, and expansion of Narcotics Anonymous. A Narcotics Anonymous group is located in Belleville and in April 2019, a Narcotics Anonymous group was initiated in Trenton.

Involving people with **lived experience** is a guiding principle through which systems can ensure that services and processes meet the needs of the people for whom they are designed. A key informant discussed the importance of involving people with lived experience in research and policy-making.

> "I think the most important thing we can do in any addiction-related research is to listen to the people with lived experience, and to continue listening to them, and to build policy that reflects their reality." – Key Informant

Focus group participants provided much greater detail about how lived experience is currently valued in society and the benefits it can bring to existing services. The insight of focus group participants into this topic demonstrates that individuals with lived experience of problematic substance use can offer perspectives that may not be realized by service providers. Many focus group participants described finding it difficult to relate to service providers who learned about addiction through "textbooks" rather than their own experience, giving the impression that they did not find these interactions genuine. Additionally, interacting with people with lived experience, who are in recovery, inspires hope.

> "You have to live it. People who have actually lived that story and have made themselves better, need to show people that are addicted that if I can do it, even though you have nobody or even if they do, if I can do it, you can do it." – Focus Group Participant

A focus group participant expressed that when systems do not involve people with lived experience, people who use substances are kept "hidden." Focus group participants suggested many roles for people with lived experience, including supporting clients currently using substances, providing outreach to distribute harm reduction supplies, and delivering programs to prevent problematic substance use. Ultimately, focus group participants felt that the value of lived experience must be respected and utilized.

> "We are people first and foremost. We are human beings and we matter, and our voice matters, and we need to see that reciprocated back to us, you know, that respect needs to be given. I feel that we earned that." – Focus Group Participant

Key informants named **trauma-informed care** as a framework that should be applied to systems that interact with people who use drugs, including the health care system and the criminal justice system, and to direct services for problematic substance use, such as harm reduction and counselling.

> "I think all health care should be trauma-informed because people don't understand the effects of trauma on the brain and brain development, and how much that affects someone. So, there's a gap there for a lot of service providers who don't understand that fact." – Key Informant

Definitions of trauma-informed care typically emphasize the prevalence of trauma; the impact of trauma on physical, emotional, and mental health and on behaviours and engagement with services; and an understanding of the role that services can play in helping traumatized individuals feel control and empowerment (22). Focus group participants did not specifically use the term "trauma-informed care," but were very aware of the role of past trauma in their problematic substance use. Key informants explained that if systems are not trauma-informed, an individual's experiences interacting with services can be re-traumatizing. For example, when services

are fragmented, individuals can be re-traumatized by having to repeatedly retell their substance use history. Key informants suggested that education for service providers about the role of trauma in problematic substance use could help to reduce judgment and negative assumptions about their client's behaviour. Trauma-informed care helps systems to address the root causes of problematic substance use.

> "There's a lack of awareness about addiction and some of the trauma-related mental health issues like personality disorders and post-traumatic stress disorder. Sometimes it looks like a client is being difficult or manipulative, but that really is their illness, and that's a big barrier, especially, I find in primary care, just a lack of awareness, so that makes them [clients] hard to reach because it looks like they are not cooperating, but that's really not the case." – Key Informant

Anti-Stigma Education

Key informants discussed the need for education and purposeful conversations to address public stigma related to substance use and people who use drugs. Some key informants drew parallels between stigma reduction efforts for problematic substance use and the substantial progress that has been made to address stigma surrounding mental illness. Broadening the public's perception of who is affected by problematic substance use was suggested as a means of reducing stigma, including education about local examples of problematic substance use issues.

> "I think people need to realize that addiction has so many faces. You know, it's not what you see downtown, like that is one extreme side of addiction that I think people judge our community by, and it's not the case at all. We have so many sheltered users and they're out of the way because they don't feel like there is any support." – Key Informant

Anti-stigma interventions should humanize problematic substance use and substance use disorders and break down the boundaries between "them" and "us." A key informant postulated that this might occur if there are more opportunities for the public to engage with and hear from people who have had issues in the past or are currently engaging in problematic substance use.

> "There should be more public awareness or more opportunity for the public to engage, for the community to not be so separated [from people who use substances], and for people in this area to understand that these people are part of the community. Once you make the situation human and you put a human face on it, the stories are just really, really powerful. And then I think people can relate to it better and then open up the possibility of thinking about something differently. I think when you have the community on board, then, you know, anything's possible…" – Key Informant

Additionally, stigma reduction should rewrite narratives about why individuals might use substances even when their use is associated with negative consequences. Anti-stigma education may help to limit the perpetuation of guilt and shame that results from perceptions that problematic substance use is a personal choice. Negative narratives prevent individuals from seeking help.

> "Nobody wants to not have a job, nobody wants to have their kids taken away from them. These are not voluntary decisions. If the education goes out and we have a good look at why these people are doing this, then more people would start to understand that these are traumatized individuals, severely traumatized individuals, that are seeking help that they can't find and hence have to route themselves into their own kind of self-help phenomenon by finding chemical comfort that soothes that horrible feeling of anxiety." – Key Informant

Increase Access to Opiate Agonist Therapy

OAT is an effective and widely used treatment for opioid dependence. Methadone and suboxone are two prescription OATs. Methadone is the most widely used OAT in Canada, followed by suboxone. Although both methadone and suboxone have many benefits, suboxone offers the advantage of addressing known limitations of methadone, including a better safety profile, fewer side effects, potential for faster tapering, and quicker stabilization, allowing individuals to take their prescription at home rather than travel to a clinic. It is important to note that suboxone has its own limitations, such as the risk of precipitated withdrawal when treatment is started (58). The choice between methadone or suboxone as a treatment plan must be weighed for each individual. Increasing physicians' awareness of suboxone ensures that the choice of OATs is available and may alleviate the strain on local methadone clinics. Focus group participants and key informants felt that the main ways to increase methadone access would be to increase the number of locations and address transportation challenges, either through financial assistance or a more readily available transportation service.

Government Advocacy

At a systems level, there are government decisions that can increase access to harm reduction and treatment services. Advocacy by appropriate stakeholders can help to achieve political commitment for specific goals. One opportunity to address significant lapses in methadone access is to advocate for changes or removal of bylaw amendments in Belleville and Quinte West that affect where methadone clinics can operate. Issue-framing should be part of this strategy, as there are many misconceptions about the impacts of methadone on community safety. Issue-framing can help to challenge these misconceptions and highlight how positive it is for people to be accessing and experiencing recovery through OATs.

> "I think it's important to talk about the good news stories and their resiliency and one of the things that was really profound for me was the fact that the average person does not realize or appreciate how much effort it takes to be on a methadone maintenance treatment program and stick with it over the long term." – Key Informant

Another municipal-level advocacy opportunity is to gain political commitment to increase the number of sharps containers on city-owned property. Currently HPEPH has agreements with community agencies, who work with people who use drugs and some pharmacies in smaller communities, to provide NEP supplies. All sites are also provided with sharps containers to give to clients for safe disposal of NEP supplies. HPEPH is contacted by agencies who would like to have larger wall or ground mounted sharps containers for public disposal and assist in the disposal and changing of containers when they are full. HPEPH currently has agreements with the City of Belleville and the City of Bancroft to have the sharps containers on municipal property. No other municipalities have disposal sites on municipally-owned properties. There is room for growth in the number of municipalities offering sharps containers on their properties and the number of locations with sharps containers where these agreements already exist (i.e., Belleville and Bancroft). Both focus group participants and key informants noted the absence of sharps containers in public areas (e.g., parks), stating that this contributes to used needles being discarded on the ground.

> "The city doesn't really have any places where people can dispose of these needles, themselves, like there's a couple down on the Waterfront Trail that have just been put in, I think there's like one or two and they had to be lobbied to put in for a really long time. So, I think maybe it's the public health spectrum of the program. There could be more done as far as the public education about the public safety of it." – Key Informant

Key informants noted that the public seems to be "against" NEP because they do not understand the severity of problematic substance use in HPEC. Public education about the purpose of the program and its benefits to public safety could influence municipal leaders to increase the number of locations where they make sharps containers available. Advocating for the need and collaborating with local community partners to install additional sharps containers where people use drugs (e.g., Deli Park in Picton) is a potential role for HPEPH.

Focus group participants discussed advocacy opportunities at provincial and federal levels. Advocacy for basic income was suggested to provide individuals with inadequate resources to improve their access to the SDOH (e.g., housing, income, and food). Focus group participants also discussed the benefits of decriminalizing substance use or legalizing and regulating illicit substances, acknowledging that drugs will always be present in society and the goal should be to reduce their harms. Specifically, focus group participants stated that government regulation would reduce use of contaminated substances.

> "That's why pills were such a good idea because you got them from the government. They were regulated, you knew what you were getting. It was clean, it's … Now it's … Who knows what's in that?" – Focus Group Participant

Service Delivery Models

Service delivery models provide a framework that defines the way that services are delivered. Focus group participants and key informants discussed several service delivery models that could be implemented or expanded to address gaps in existing services, including outreach, drop-in services, peer support, and safe consumption sites.

Outreach Services

Outreach is a service delivery model in which services are delivered outside of a traditional clinic setting (13). Its various forms aim to reduce barriers related to transportation or stigma that prevent individuals from physically attending a service site. Mobile vans, for example, can offer services at several locations and across a range of hours.

> "I think that in the North, if there was a van that went around some of these closed communities, whether they be social housing complexes or small rural areas that don't have access to transportation, that taking the program to the clients instead of expecting the clients to come to the program would probably be more helpful." – Key Informant

Another key informant questioned whether accessing services through a mobile service would be a stigmatizing experience and whether sheltered individuals would be interested in this service delivery model over other options.

> "I don't know, but street-based services to me sounds more like, to me that would be again a stigma thing for people, but most of the folks I've worked with have been like they've had housing and things like that." – Key Informant

HIV AIDS Regional Services, based out of Kingston, has recently initiated a mobile outreach van staffed with nurses and people with lived experience. As a partner, HPEPH will provide nursing staff for 16 hours per month to assist with the delivery of outreach services. It will be able to provide clients in rural areas of HPEC with harm reduction supplies, wound care, sexual health services, and immunizations. This is set to launch in the fall of 2019.

Street outreach specifically targets individuals who are experiencing homelessness. Whereas one key informant wondered whether there is a large enough unsheltered homeless population (vs. provisionally accommodated) to

suffice a street outreach service, another stated that it would help to reach individuals who may not be interacting with services in fixed sites. Focus group participants reiterated that street outreach can be beneficial to individuals who are struggling to initiate help seeking or navigate available services.

> "I think with street-based services, if you go where the people are, you're more likely to connect with them. It just makes sense." – Key Informant

Home visiting programs allow for service providers to access clients directly in their homes. Home visiting can help to reach clients who avoid clinic-based services due to trauma or mental illness or have inadequate transportation.

> "I feel like home visiting is really good because I have definitely worked with people who I would have never seen if I did not do home visits." – Key Informant

Drop-In Services

Drop-in services do not require set appointment times and typically operate on a first-come first-served basis. The drop-in model was a common feature of potential new or expanded services proposed by focus group participants. Specifically, focus group participants mentioned the desire to be able to drop-in to talk to a peer or counsellor in an informal setting. Key informants discussed the benefits of being able to drop-in to simultaneously access harm reduction supplies and other forms of support. Long-term planning to attend set appointments can be challenging to balance with more immediate physical, emotional, and relationship needs that arise. Drop-in services also address the need for supports that are available when people who use drugs feel ready to access them. The Belleville Opioid Management Program and the RAAM clinics in Trenton and Marmora both offer drop-in services, with counselling available.

Peer Support

Peer support is a model through which people with lived experience of problematic substance use can participate in service delivery by providing knowledge, experience, and support to their peers. Narcotics Anonymous and Alcoholics Anonymous have a peer support component. Peer support can be integrated into existing services or inform the design of new programs. Peer support is often formalized through required training. Mentorship and relationship building, offered through peer support, is strengthened by shared experiences and understanding. In other words, clients can relate to peers because they have "walked in their shoes." This unique connection helps to provide a "lifeline" to individuals who have become isolated from their social support networks.

> "They need to know that there's people out there, even though they don't have their family anymore, there's still people out there that have been where they've been, and they still care about them." – Focus Group Participant

Focus group participants reported positive experiences receiving peer support and the desire to have a role in peer support efforts. Key informants and focus group participants also spoke to the potential stress and "burn out" that can occur in peer support positions and the need for continuous direction and reinforcement. The emotional toll and expertise involved in peer support may not be reflected in the wages paid for these positions.

> "The really unfortunate thing is it's a highly stressful and emotionally exhausting job and they are paid minimum wage. So, you are saying, 'You're a valued member of the health care team. I am making 30 bucks an hour, you are out there doing all the footwork, actually interacting with the people that are using, but we are going to pay you 15 bucks an hour.' That's not even a living

wage for most of us. So, when do peers get their respect for the work that they are doing?"
– Focus Group Participant

Safe Consumption Sites

Safe consumption sites are facilities that provide sterile drug use equipment where people can use pre-obtained drugs in a safe and clean space, supervised by trained staff who can respond to overdoses (17). Safe consumption sites often also provide other health and social services to address substance-related harms and can connect clients to other organizations in the community. These facilities help to reduce the use of substances in isolation and provide an environment that is private and non-judgmental. Individuals can dispose of their used equipment directly at the facility and do not face legal consequences for possession or use of illicit substances at the facility.

> "You see those commercials all the time that if you're going to use, use with your buddy, right? So, us kind of creating that society where we have these things put in place as a buddy system, so they're coming for their clean needles, they are coming to grab something to eat, they have a safe place to use, they have the naloxone kit…" – Key Informant

Key informants and focus group participants generally had the view that although a safe consumption site would be beneficial for people who use drugs and for the public, it is not a service delivery model likely to be implemented in HPEC. Focus group participants attributed this to a lack of political will to prioritize the health and well-being of people who use drugs.

> "Put it this way, okay? If there were people dying, old people dying on the street, shelters would be opened in a second. They did it in Toronto, as soon as people were dying on the street in extreme cold, shelters were popping up. Military armouries were opening up for shelters, okay? We have people dying because of drug overdoses. Nothing." – Focus Group Participant

To promote the health of people who use drugs, focus group participants clearly voiced the need to change the way the public thinks about harm reduction services.

> "The other thing people don't realize is not only is it safer to those that are addicted, it's safer for the community as a whole, right? They are going to be finding less needles in the park, there's going to be less overdoses, there's going to be less crime…" – Focus Group Participant

Increasing public awareness about the benefits of safe consumption sites to population health could increase buy-in for implementing this service delivery model. The perceived lack of political and public support for a safe consumption site in HPEC presents additional opportunities for political advocacy and anti-stigma education surrounding the harm reduction approach to addressing problematic substance use.

> "I don't think the goal should be focused on being cured. I don't believe we are ever cured. I believe we are addicts for life, but I mean you can be abstinent, absolutely. But I don't think that's the goal, I think the goal is keeping people safe and alive while they are using and treating them with dignity and respect." – Focus Group Participant

Community Hub

A community hub is a public space that offers co-located or integrated services such as education, health care, and social services. Community hubs are sometimes described as "one stop shops" and are similar to CHCs or Family Health Teams. Community hubs reduce silos between individual services and organizations. In this project, community hubs are more likely to specialize in services for people who use drugs. This service delivery model reduces barriers to accessing services that are related to transportation and system navigation. The community

hub centralizes a variety of services, which might include OATs, dispensing and disposal of harm reduction supplies, and services that address the SDOH. The co-location of these services ensures that individuals' needs are addressed holistically with the added benefit that service providers are able to collaborate more freely in a shared space.

> "If everyone was together, I think there would be a greater opportunity to integrate our services and help people more thoroughly." – Key Informant

> "Everybody's talking to everybody and working as a team to help support individuals versus a siloed doctor's office where you go, and you wait, you see a doctor, you leave, and you are referred outside of the organization. Care is very fractured…" – Key Informant

Co-location of harm reduction and treatment services for substance use with general health and social services could reduce the stigma that individuals experience by attending a service specifically for problematic substance use (e.g., an OAT clinic). Community hubs also provide a centralized source of information about community services and harm reduction information such as drug contamination and overdose warnings.

Organizational-Level Solutions

Guiding Principles

Through analysis of participant responses, a set of broad philosophies or values were identified to guide the practices of individual organizations. These guiding principles can provide a framework for an organization's decision-making and actions and are intended to help organizations better meet client needs (Table 6).

Table 6. Guiding Principles for Organizations

- Flexible programming
- Integration of services
- Holistic model of care
- Multi-sectoral collaboration
- Stigma reduction

Greater flexibility in local program delivery is needed to overcome several of the barriers to access that were described in the previous section. Flexibility is typically supported by organizational policies and mandates that allow services and staff to provide client-centred care. Adapting the hours of operation of organizations providing harm reduction and treatment services was voiced as an important solution to increase uptake of such services. Extending hours of operation beyond regular business hours to evenings, weekends, and even 24-hour access, would provide greater accessibility when clients are ready to take action.

Organizational policies that allow staff to meet their clients "where they are at" further reduce physical barriers to access. This would involve reconceptualizing the care setting to go beyond the traditional office environment to include client's homes, parks, coffee shops, or wherever the client feels safe to receive care. Developing organizational transportation policies that permit staff to drive and accompany clients to their appointments was also suggested, as some clients may need additional support to access needed services, particularly for the first time.

> "[A suggestion to reduce the stigma associated with accessing services like NEP or methadone would be] …. To have support to go for the first time… If someone was having some reservations about going, I would offer to go with them. And just walk in with them and be there with them and support them and what they need to do. So, I think that could be helpful." – Key Informant

Reorienting existing programs to respond better to local needs was also suggested. Key informants provided examples of staff being empowered to advocate for program improvement and/or innovative solutions to address client challenges. These included the establishment of a new rooming-in program in Belleville for babies born to

moms who are dependent on opioids and the use of organizational budgets to purchase Good Food Boxes for clients experiencing food insecurity. Exploring opportunities to incorporate the use of technology (e.g., telemedicine) into program delivery was also suggested to facilitate access.

Organizations working with people who use drugs should strive to adopt a holistic approach to care that involves consideration of the whole person. Holistic care recognizes the interdependence of biological, social, psychological, and spiritual factors in health and well-being, including the role of the SDOH (9). Key informants spoke of the importance of service organizations supporting clients to address challenges relating to the SDOH (e.g., childcare, transportation), providing opportunities for social interaction, and developing alternative coping skills (e.g., knitting).

Improved integration of services within organizations would help to meet the needs of clients and reduce barriers to accessing and navigating the health care system. Integration brings together complementary services under one organization, system network, or other arrangement. Whereas focus group participants focused on the need to integrate mental health and addictions counselling services within the hospital environment to facilitate care following an overdose, key informants emphasized the need to improve service integration in local methadone clinics.

Considering the relationship between intravenous drug use and increased risk of blood-borne infections, one key informant suggested that the integration of hepatitis C management and methadone maintenance treatment should be explored. Several other key informants stressed the need for methadone clinics to integrate mental health and addiction counselling into their service delivery, which reflects best practice. While methadone is helpful, it does not address the root causes of problematic substance use. The risk of relapse was described as greater in absence of integrated mental health and addiction counselling.

> "Locally part of the problem was that best practices for methadone maintenance treatment services as outlined by the government weren't being followed, so people weren't being really offered a lot of counselling. It was really just a place to get your methadone and without a lot of other supports…." – Key Informant

In addition to service integration within services, collaboration is required with health and non-health sector partners to address the harms associated with opioids and other drugs. As this issue affects the community at large, it simply cannot be remedied by one organization alone. Suggested examples of multi-sectoral collaboration included local police partnering a peer support organization and counselling agencies collaborating with the OATC by offering their services at the clinic site.

Increase Access to Harm Reduction Supplies

Respondents expressed the need for increased access to naloxone, NEP, and safer inhalation supplies. As of June 2019, 33 pharmacies across HPEC, Change HealthCare (Picton), and two local OATCs (Bancroft and Belleville) distribute naloxone. HPEPH currently provides naloxone kits through the Lifesaver program to 14 individual locations (6 organizations) for distribution to clients (Appendix A) and has trained over 35 community organizations since 2016 on how to administer naloxone in case of an overdose. Key informants nevertheless discussed that naloxone should be made available *for distribution* in a greater variety of community settings across HPEC.

> "I want to get out kits on the streets. I want them to be available everywhere. I want every store shop in town to have naloxone kit in their cash register. I want our emergency room to be distributing naloxone aggressively…" – Key Informant

As of June 2019, HPEPH's NEP distributes and collects needles to/from approximately 20 community agencies, including health centres, addictions and treatment centres, pharmacies, hospitals, support centres, shelters, food banks, social support services, and municipalities across HPEC (Appendix B). Nevertheless, expanding the locations where the NEP is provided was viewed as a continued priority to facilitate greater local access. It was voiced that additional local service organizations may be interested in playing a role in HPEPH's NEP.

> "More needle exchange programs locations, I don't know like we have one now in the Belleville office and that's really awesome because I don't have them in my office…I feel 100 percent that they would feel comfortable asking me for them had I had them and maybe I'm not, you know, maybe not, but I feel like they would and maybe they wouldn't always go to the needle exchange program so. So, expand programs for other drugs possibly." – Key Informant

Stigma Reduction

Focus group participants advocated for the need to create safe spaces for people who use drugs to access care. A safe space is an environment or place created for people who use drugs (or other marginalized populations) to feel free from judgment or harm. They have an ethos of respect that acknowledges the steps that people who use drugs are taking to improve their circumstances. Safe spaces may also provide opportunities for socialization, recreation, and social support, thereby helping people who use drugs, or who are undergoing treatment, to divert their attention from substance use. Organizations may consider creating such spaces within their existing facilities, and it may be as simple as providing coffee in a different social context.

> "What we have done is to open up our doors at about 10 o'clock and coffee is on so that people who maybe don't have coffee at home, but don't want to go for example to peer support because there are people, they don't want to go somewhere where they're going to necessarily talk about addiction, even if it's a helpful conversation. They don't want to think about their addiction. So, they will come here and have coffee here. It's a different environment where that's not even part of the context around them. So, it makes it easier if they're trying to stay clean to, you know, keep their thoughts and what they're hearing in conversations away from drug addiction." – Key Informant

Organizations involved in harm reduction may also consider taking steps to further increase the anonymity for those accessing their services. To reduce the stigma associated with accessing NEP, focus group participants expressed that the program might consider a more discrete distribution site in downtown Belleville, with a back door. Similarly, to reduce stigma when accessing methadone maintenance therapy, it was suggested that methadone clinics (i.e., OATC) rebrand their signage to be more consistent with that of a medical clinic. Organizations should also strive to reduce the amount of personal information that is required to gain access to harm reduction programs.

> "They don't have to give any information. We don't take down any of their information at all, you know confidential, so I think maybe that helps the program out. We have people that come in and say, 'You know it's not for me, I'm picking up for whoever,' and it's like, 'Okay, you know I don't care,' if that's how people need to use the system…" – Key Informant

Raise Public Awareness

To address the fact that many people who use drugs are not aware of existing community supports, participants emphasized the need for organizations to improve the promotion of their programs and services. For example, people who use drugs were described as unaware of what is being offered by the BQWCHC. It was suggested that

the BQWCHC strengthen the advertising of their programs and consider posting a large calendar of upcoming events on the outside of their building.

To communicate warnings of drug contamination or an increase in accidental overdoses, focus group participants suggested that HPEPH post signage where NEP kits are accessed and a notice within each individual kit. Another suggestion would be to shape public opinion regarding Canada's Good Samaritan Drug Overdose Act. Although focus group participants appeared to be aware of the Act, it was evident that they were not confident in its local adherence. HPEPH might consider collaborating with local law enforcement to ensure that fear of legal repercussions does not prevent individuals from seeking emergency assistance during an overdose.

> "There's a difference between being aware [of the Good Samaritan Drug Overdose Act] and actually believing… I think just hearing it from other sources, maybe even…signage that we could distribute or have posters that we can have up in our centres that indicate that it's okay to call them." – Key Informant

Service Provider-Level Solutions

Guiding Principles

Connecting clients between organizations was also described to be essential to maintaining client relationships. Several key informants spoke of *referring* clients to other services or agencies that are outside of their professional scope of practice or organizational mandate (Table 7). This allows the organization to

Table 7. Guiding Principles for Service Providers

- Referral
- Judgment-free care
- Trauma-informed care

continue to help the client, while ensuring that the client receives the care that they need. Referral is particularly important if services are not integrated. Establishing common awareness of resources among local service providers is needed to develop a strong community of practice to support people who use drugs.

Establishing trust is difficult for many clients, particularly those who are vulnerable or marginalized. Service providers, who practise *judgment-free care* work to understand and empathize where the client is coming from, are seen as accepting and compassionate, and they make the client feel safe, respected, and supported. When people who use drugs feel safe and experience judgment-free care, they are more likely to be receptive to the service provider and return for the service.

> "…When you're really poor you live in the moment. There's not a lot of forward planning or ability to set long-term goals when you're in crisis, so you need somebody to help you, and it can't just be anyone, it has to be someone that you develop a relationship with and that the client knows…The communities that I go into, the people feel like the people who are providing the services don't care about them and don't know who they are. They kind of feel like they're just random, you know, I go into a meeting with a client and to do like a warm hand off with an addiction counselor for example and the client thinks of rolling their eyes because they feel like the counsellor hasn't got a clue of who they are and what they're living. People need someone to help us see what their needs are and help them address them"
> – Key Informant

Understanding the root causes of problematic substance use is also central to *trauma-informed care*. Service providers practising trauma-informed care understand the role of trauma in problematic substance use and prioritize the trauma survivor's safety, choice, and control. It was recognized by many key informants that people who use drugs may have experienced trauma at some point in their lives; however, not all service providers

understand the role that trauma plays in problematic substance use. Increasing the capacity of local service providers to practise trauma-informed care, particularly those in the primary care sector, was identified as a priority to increase their understanding of the mental health underpinnings of problematic substance use.

> "I think all health care should be trauma informed because people don't understand the effects of trauma on the brain and brain development, and how much that affects someone. So, there's a gap there for a lot of service providers, to like, they don't understand that fact and it's also important…" – Key Informant

Ongoing Professional Development

In addition to learning how to practise trauma-informed care, it is important that service providers working with people who use drugs engage in ongoing professional development. Anti-stigma education was identified as beneficial for local service providers to reduce this major barrier to access. Helping service providers understand the current local context of problematic substance use, the determinants of problematic substance use, and the impacts on the SDOH is needed to reduce stigma in the health sector.

> "Our nurses in our emergency rooms are not extremely well-versed… In what the person, who presents in an addictions-related crisis to the emergency room, needs. What are their lives like and what kinds of things can we offer them? I think that some training for the service provider [is needed], so anti-stigma training." – Key Informant

Service providers should also be adequately prepared to engage in health teaching with their clients about the risks of specific substance use behaviours and offer alternatives that decrease those risks. This may include teaching clients about the infectious disease risks associated with sharing injection drug use equipment, how much of a substance can be taken safely, and routinely reviewing all medications that the client may be taking.

> "I think on their own, in a lot of ways, no. I think as care providers, it's our responsibility to make sure that they are aware of the consequences of high-risk behaviour and we can only do that through health teaching and that's one of the first parts of harm reduction." – Key Informant

Individual-Level Solutions

Focus group participants and key informants did not provide individual-level solutions for people who use drugs to adopt. This is not to say that individual risk and protective factors for problematic substance use are not important; rather, it suggests that actors in higher levels of the social ecological model may have a more positive impact on these factors in a population. For example, governments can impact policies that affect individuals experiencing poverty, and organizations can adopt communication strategies that increase individuals' perceived risk of contaminated substances. The levels of any social ecological model are nested and hierarchal, meaning that strategies that are most effective are comprehensive (i.e., include all levels) and that the outermost layer (i.e., the system level) is the most effective at creating population-level change. Involving people with lived experience in program planning, delivery, and evaluation was a prominent solution identified in thematic analysis, demonstrating that people who use drugs can actively play a role in addressing problematic substance use. However, it is the responsibility of systems and organizations to create infrastructure in which this can happen in a mutually beneficial way.

Social ecological models situate individuals within larger social systems and describe how health outcomes are created by the interaction between individuals and their environments (48). Comprehensive approaches take advantage of these interactions by acting across levels, allowing interventions to reinforce one another. Strategies that rely on individuals initiating lifestyle changes ignore the contextual forces that influence health and health

behaviours. Although they are the least effective in impacting population health, interventions at the individual-level (e.g., health education campaigns) are the most readily available in health promotion. By framing actions to address problematic substance use in HPEC within a social ecological model, there can be adequate foresight to avoid the mistake of overemphasizing interventions at the individual level and, instead, create comprehensive, sustained change. Grounding interventions targeting individual behaviour change in evidence-informed theories, such as the health belief model, can increase the likelihood of their success (48). The popularity of individual-level approaches is likely because interventions higher in social ecological models can be time-consuming, resource-intensive, and require specific knowledge or training. These challenges underscore the need for service providers, organizations, and systems to work collaboratively to address problematic substance use.

STRENGTHS AND LIMITATIONS

DEPENDABILITY

Key informant interviews and focus groups were audio-recorded and transcribed by a professional transcription service. Overall, this enhanced the dependability of qualitative coding; however, the transcription service incorrectly transcribed some words and phrases, which meant researchers needed to complete the thematic analysis to resolve these issues, using clues in the text. Investigators' notes throughout thematic analysis acted as an audit trail of coding decisions, and time set aside to complete the analysis was in close succession. These strategies helped investigators maintain a consistent approach to coding throughout the project.

TRANSFERABILITY

Key informant interviews were scheduled and conducted with a variety of stakeholders to ensure that a range of experiences and perspectives were captured. Investigators began thematic analysis of the transcripts after all interviews were completed. This was a very lengthy process due to the number of key informants interviewed, with saturation of findings being achieved before all transcripts were analyzed. Completing thematic analysis after each interview may have allowed researchers to stop analysis when their findings were saturated, thereby reducing the amount of time needed to complete this project.

Focus groups of people with lived experience varied in attendance across geographic locations. This may have impacted the transferability of findings to other individuals residing in HPEC communities. For example, the focus group help in Picton only had one attendee.

CREDIBILITY

The number of investigators contributing to this project may have impacted the credibility of its findings. Although the primary investigator was present at each focus group, the presence of the second facilitator was inconsistent. This created variance in the delivery of focus group questions, as some facilitators were more likely to probe or diverge from the script. The investigators who completed the thematic analysis did not conduct the interviews or focus groups. These investigators found occasional instances of leading questions in the transcripts and responded by not emphasizing the responses to these questions. In other instances, the wording of questions may have influenced the responses of participants. For example, questions about the "types of drugs" used in HPEC may have prompted more responses about illicit drugs than legal drugs such as alcohol, tobacco, or cannabis. The study design was informed and reviewed in partnership with the North Hastings Opioid Response Committee, including individuals with lived experience, but member checking with participants of the focus groups and interviews was not completed. The issues identified with the design and delivery of the survey component of this project limited the ability of investigators to triangulate qualitative findings with other data.

CONFIRMABILITY

Investigator triangulation facilitated the validation of themes identified through coding. Two investigators completed most of the analysis together to reach consensus on coding decisions. These investigators developed several levels of codes prior to determining themes that provided many opportunities to re-analyze the transcripts. A code dictionary was also created and edited through consensus. The code dictionary guided thematic analysis and helped investigators co-write their findings. An investigator who was not involved in thematic analysis reviewed the findings for accuracy.

CONCLUSION AND RECOMMENDATIONS

The complexity involved in the current opioid crisis is best classified as a "wicked" public health problem. Wicked problems are difficult to solve because of incomplete, contradictory, and changing requirements that are often difficult to recognize, and they require sustained, comprehensive solutions that engage the public, service providers, and people with lived experience. The social ecological model identified in this project provides a framework to target these solutions. As HPEPH and other stakeholders continue to address the opioid crisis and other problematic substance use, it remains important to complete ongoing local surveillance. The surveillance presented in this report shows that the landscape of substance use and opioid-related harms is changing. HPEC needs timely, coordinated, and evidence-informed actions to respond. The findings of this situational assessment are intended to provide direction in these efforts.

The voices of people with lived experience and those working with people who use drugs have provided this situational assessment with a rich narrative of the local context of opioids and other drugs. They have improved our understanding of the impacts of problematic substance use, barriers to accessing harm reduction services and treatment, and potential solutions to addressing such barriers. In addition to suggesting the need for upstream interventions to address the primary prevention of problematic substance use, they have highlighted the need for public health to work towards promoting the health of people who use drugs.

The following recommendations have been informed through thematic qualitative analysis, and together, they provide broad direction regarding the key components to include in a regional substance use strategy. As many of the recommendations necessitate multi-sectoral collaboration and engagement of those with lived experience, it is important to view these as a springboard for discussion with our community stakeholders during the development of a collaborative strategy.

POLICY ADVOCACY

1. Advocate for local, healthy public policies to create supportive environments for people who use drugs. Issue-framing will be facilitated by the implementation of an anti-stigma strategy (described below). Poverty, transportation, housing, food insecurity, and access to primary care should be considered as key advocacy topics.

2. Advocate for municipal public health policies that are supportive of harm reduction. This may include advocating for municipal by-laws and policies that are inclusive of addiction treatment services, including opioid agonist therapy (e.g., methadone clinics).

3. Advocate for the increased allocation of provincial government resources to support mental health, addictions, and harm reduction in HPEC. This would help to address the inequities in resource distribution among different geographies across Ontario that were described by participants.

STAKEHOLDER ENGAGEMENT

1. Engage multi-sectoral community stakeholders, including people with lived experience, in the development of a regional harm reduction strategy for illicit substances (see Knowledge Exchange). Effective harm reduction requires a collaborative, comprehensive, and sustainable community approach, and, therefore, should be developed in partnership with local community stakeholders.

2. Meaningfully engage people with lived experience in all stages of substance use and harm reduction program development. Those with lived experience are invaluable to the development of effective interventions, and as such, their expertise and time should be compensated appropriately (e.g., provided with a living wage).

PREVENTION OF PROBLEMATIC SUBSTANCE USE

1. Focus on upstream interventions to address the social determinants of problematic substance use (e.g., ACEs, access to recreation [e.g., youth centres], education [e.g., schools], poverty, social isolation and exclusion, food insecurity, housing, and their intersections. Multi-sectoral collaboration and policy advocacy are needed to advance these social determinants within HPEC.

SYSTEM REORIENTATION

1. Collaborate with Ontario Health Teams to explore potential opportunities to reorient existing HPEC mental health, addiction, and harm reduction services to ensure that people who use drugs receive the care that they need. This may include increasing access to mental health and addiction counseling, developing community hubs or expanding the existing family health team model, and implementing drop-in models to meet clients where they are.

2. Support efforts to improve system navigation at system and/or organizational levels. Collaborating with community partners to offer fairs, conferences, or other networking opportunities to increase awareness of available local services and supports, will benefit both service providers and people who use drugs.

PUBLIC AWARENESS AND STIGMA REDUCTION

1. Work with local community stakeholders to develop an evidence-based, multi-faceted anti-stigma campaign. This should be integrated as a key component of a regional harm reduction strategy for illicit substances and include tailored communication strategies for the general public, health care and other service providers, and municipal decision-makers.

2. Explore existing communication approaches regarding the Good Samaritan Law. A collaborative approach by local police, emergency medical services, and HPEPH is needed to reassure people who use drugs that they will not face legal consequences when seeking assistance for an overdose.

3. Develop a communication strategy to raise public awareness of the dangers of local drug contamination and/or increased rates of overdose. As some participants mentioned that public warnings may be associated with potential unintended negative impacts (e.g., drug-seeking behaviour), such communications must be evidence-based. Exploration of how public warnings are approached by other Ontario Public Health Units may be warranted.

MONITORING AND SURVEILLANCE

1. Collaborate with local community partners to develop an integrated surveillance system for accurate and timely identification of substance-related harms within HPEC. This would involve the establishment of data-sharing agreements and ongoing partnership between HPEPH, emergency medical services, police, and hospitals.

2. Conduct ongoing monitoring of harm reduction program performance measures to assess the need for program adjustment, as new evidence becomes available.

CAPACITY-BUILDING

1. Increase the capacity of local community organizations, serving people who use drugs, to conduct health equity impact assessments of their programs and services. This will help to identify barriers and potential unintended impacts on people who use drugs and facilitate strategies to mitigate these impacts.

2. Support local community organizations in developing organizational policies that facilitate access to mental health, addiction and harm reduction services (e.g., organizational transportation policies).

3. Explore drug strategy models as a community framework to integrate prevention, treatment, and enforcement recommendations identified with those of harm reduction, thereby addressing the need for systems and organizations in HPEC to work collaboratively to address problematic substance use.

SERVICE DELIVERY

1. Continue to provide naloxone training. Due to focus group reports of being unaware of how to use a naloxone kit despite having one, it may be important to evaluate knowledge retention over time, how such training is being approached by dispensing organizations, and to reassess the need for re-training.

2. Continue to increase the number and variety of community organizations involved in naloxone kit distribution in accordance with the Ontario Naloxone Program. Appendix C lists naloxone distribution locations.

3. Increase the number of sharps disposal sites that are available throughout HPEC. Decisions regarding their locations should be informed by people who use drugs and where substance use occurs. Collaboration with local community stakeholders, including municipalities, will be necessary.

4. Increase the number of NEP distribution sites across HPEC. Decisions should be informed by people who use drugs with consideration of hours and locations that are most accessible. New sites require adequate promotion to ensure that individuals are aware of available services.

KNOWLEDGE EXCHANGE

1. Develop a robust knowledge exchange strategy to communicate the findings of the situational assessment. This may include the following:
    a. Create tailored knowledge exchange products for project participants and community stakeholders (e.g., infographics).
    b. Organize and facilitate a problematic substance use and harm reduction action planning day to communicate the results of this report to community stakeholders and determine next steps to implementing recommendations.
    c. Host an educational event for health care providers to share and discuss the findings of this situational assessment. This may also provide an opportunity to discuss the impact that stigma has on accessing care, the relationship between mental health and problematic substance use, and how local care providers may reduce barriers to accessing harm reduction in HPEC (e.g., prescribing suboxone to address service gaps).

2. Consider hosting additional educational events to update care provider knowledge of the current evidence surrounding best practices for harm reduction, stigma reduction, addressing adverse childhood experiences, and trauma-informed care.

APPENDIX A:

ORGANIZATIONS DISTRIBUTING NALOXONE*

Organization	Location
Mohawks of the Bay of Quinte Community Wellbeing Centre	Deseronto
Belleville and Quinte West Community Health Centre	Belleville Trenton
Addictions and Mental Health Services	Belleville Bancroft Madoc Trenton Picton
Marmora Medical Family Health	Marmora
North Hastings Community Trust	Bancroft
Quinte Health Care	Belleville Bancroft Picton Trenton
Three Oaks	Belleville

* List current as of September 2019

APPENDIX B:

ORGANIZATIONS THAT DISTRIBUTE NEEDLE EXCHANGE PROGRAM SUPPLIES*

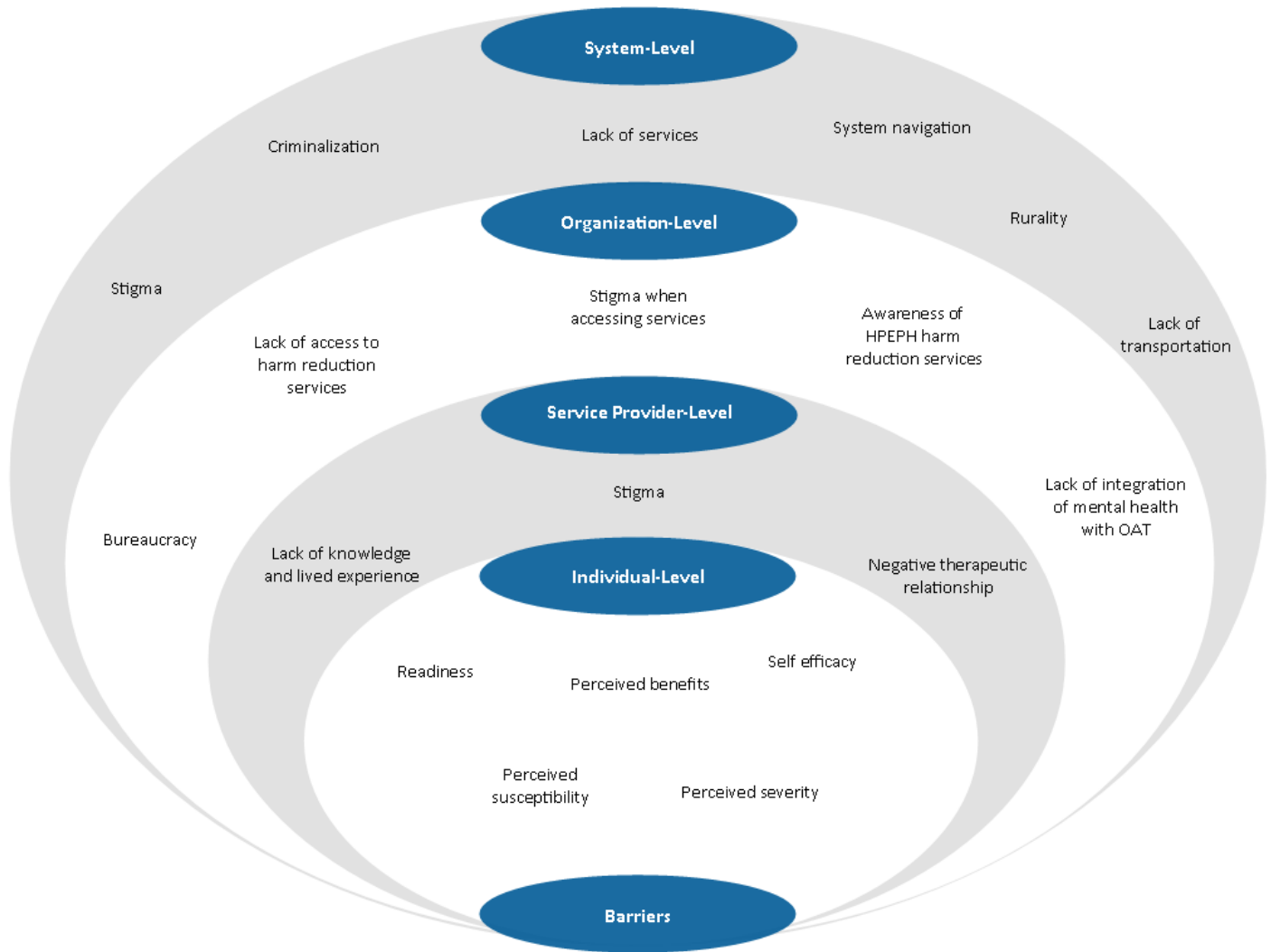| Organization	Location
Hastings Prince Edward Public Health	Belleville Trenton Bancroft
Quinte Health Care	Bancroft
Three Oaks	Belleville
Ontario Addictions Treatment Centres	Belleville Bancroft
Shopper's Drug Mart	Bancroft
Peer Support South East Ontario	Belleville Bancroft Picton Trenton
Change Health Care	Picton
North Hastings Community Trust	Bancroft
North Hastings Family Pharmacy	Bancroft
Dellar's IDA	Tweed
Stirling Pharmacy	Stirling
Loyalist College	Belleville
Johnston's Pharmacy	Madoc
Belleville Quinte West Community Health Centre	Belleville Trenton
Wellington Pharmacy	Wellington
Marmora Medical Family Health	Marmora

* List Current as of September 2019

SOCIAL ECOLOGICAL MODEL IDENTIFIED IN THEMATIC ANALYSIS

System

Structures or groups of organizations that fulfill a particular purpose or have similar mandates (i.e., type of service, governing body, or social structure)

Organization

A specific organization (i.e., Hastings Prince Edward Public Health)

Service Provider

Professionals who serve people who use drugs (i.e., primary care physicians)

Individual

People who use drugs

Barriers and Solutions that Affect Access to Services
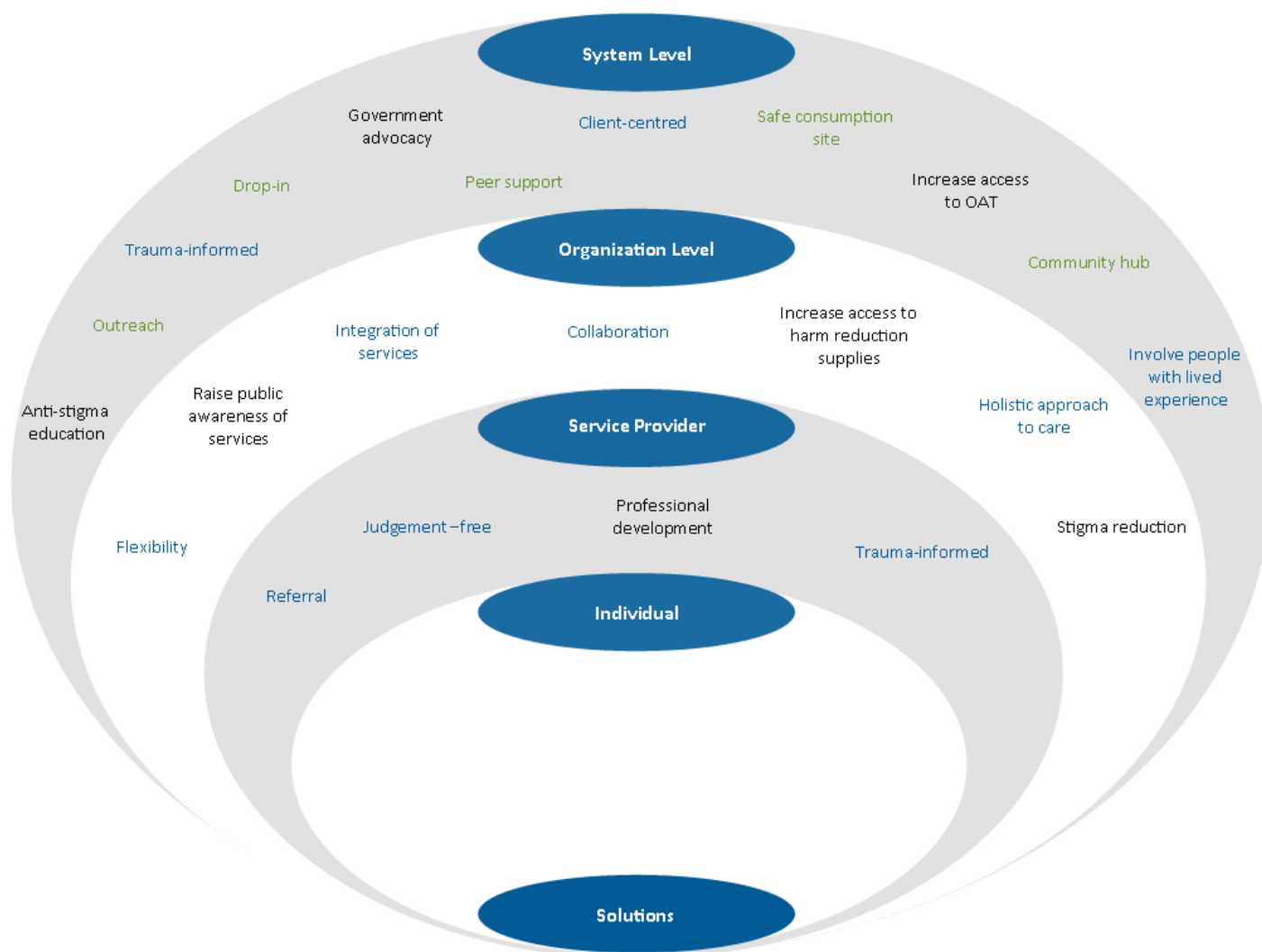
Adapted from: (47)

APPENDIX D:
SOCIAL ECOLOGICAL MODEL OF EXISTING BARRIERS TO ACCESSING SERVICES

Barriers identified by Key Informants and Focus Group participants.

SOCIAL ECOLOGICAL MODEL OF SOLUTIONS TO REDUCE BARRIERS TO ACCESSING SERVICES

Interventions suggested by Key Informants and Focus Group participants
Guiding principles
Service delivery models

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